

November 20, 2014

Ms. Lauri Kemper
Ms. Lisa Dernbach
California Regional Water Quality Control Board, Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, California 96150

Subject: Transmittal of the *Third Quarter of 2014 Agricultural Treatment Units Monitoring Report Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Dear Ms. Kemper and Ms. Dernbach:

Enclosed is Pacific Gas and Electric Company's (PG&E's) Third Quarter of 2014 Monitoring Report for the Agricultural Treatment Units (ATUs) in Hinkley, California. The report covers the period from July 1 through September 30, 2014. This report being submitted under the Monitoring and Reporting Program (MRP) specified in the ATU Waste Discharge Requirements (WDRs) set forth in California Regional Water Quality Control Board, Lahontan Region (Water Board), Board Order No. R6V-2014-0023.¹ No violations of the WDRs occurred over this reporting period.

Facility Monitoring and Operations

The Ranch ATU was expanded during the Third Quarter of 2014, and the system was restarted on September 15. The ATUs were operated in compliance with the discharge specifications provided in the WDRs during the reporting period. During site inspections, no ponding more than 24 hours was recorded, no issues were recorded at the perimeter site fencing, and ponded water did not leave the ATUs.

Soil Monitoring

Soil samples were collected in accordance with the WDRs and analyzed for hexavalent chromium [Cr(VI)], total chromium, [Cr(T)], and uranium. Trivalent chromium was calculated as the difference between Cr(T) and Cr(VI).

Groundwater Monitoring

Groundwater monitoring was conducted in accordance with the WDRs. Baseline sampling for agricultural byproducts mitigation measure WTR-MM-5 continued for the MRP ATU compliance wells and additional monitoring locations site-wide. Two more quarters of baseline data will be collected as part of the four quarter duration mitigation measure WTR-MM-5 investigation. The WTR-MM-5 investigation report is estimated to be submitted by June 30, 2015.

Domestic and Agricultural Well Monitoring Results

Monitoring activities were conducted in accordance with the WDRs for Environmental Impact Report (EIR) Mitigation Measures WTR-MM-2a and WTR-MM-2b, which specify that private domestic and agricultural wells are monitored to ensure that chromium and/or agricultural byproducts are not adversely affecting these wells due to ATU operations.

Pre-remedial sampling began during the Second Quarter of 2014, and additional quarters of pre-remedial sampling data will be needed before pre-remedial reference concentrations can be established. The

¹ California Regional Water Quality Control Board, Lahontan Region (Water Board). 2014. *Board Order No. R6V-2014-0023, Waste Discharge Requirements for Pacific Gas and Electric Company Groundwater Remediation Project, Agricultural Treatment Units* WDID No. 6B361403002, San Bernardino County. March 12.

methodology for establishing pre-remedial reference values to identify actually affected domestic wells under EIR mitigation measures WTR-MM-2a and WTR-MM-2b is currently being discussed with the Water Board²; on October 9, 2014, the Water Board issued a letter requesting public comment to review the proposed methodology.³ Identification of actually affected domestic wells under EIR mitigation Measures WTR-MM2a and WTR-MM2b (if any) will be conducted upon Water Board approval of the methodology.

During the Third Quarter of 2014, there were no domestic wells with Cr(VI) or Cr(T) concentrations that exceeded background concentrations for the first time. Therefore, no “actually affected domestic wells” were identified during the reporting period. For EIR mitigation Measures WTR-MM2a and WTR-MM2b, no potentially affected wells were identified based on annual computer modeling performed during the Second Quarter of 2014.⁴

A “potentially affected domestic well” is partially defined as a domestic supply well that has an increase in chromium concentrations due to remediation actions. The ATU WDRs do not specify what should be considered to be an “increase in chromium concentration” or what methods might be employed to make such a determination in the WTR-MM-2a domestic wells. Also, in the event that an increase in chromium concentration is identified, the ATU WDRs do not specify the methods to determine if the increase is due to remedial actions. Criteria and methodologies to make these determinations need to be developed. In the interim, for the current data set, a statistical evaluation of Cr(VI) trends was performed using data for all domestic wells in the WTR-MM-2a program with eight or more sample results between January 2011 and September 30, 2014. The trend analysis was conducted to identify domestic supply wells (if any) that might exhibit increasing chromium concentration trends. As summarized in this report the non-parametric Mann-Kendall statistical trend analysis of 60 domestic wells in the WTR-MM-2a area did not indicate increasing trends at any of these wells. Therefore, no potentially affected wells were identified.

To evaluate agricultural byproducts potentially originating from the ATUs as part of WTR-MM-2b, monitoring well data for six wells with available data for the proposed baseline period (April 1, 2012, through March 31, 2014)⁵ were also evaluated to assess whether there are monitoring wells potentially affected by ATU operations that could indicate potentially affected domestic or agricultural supply wells. During the Third Quarter of 2014, nitrate concentrations decreased from the proposed maximum baseline concentrations reported from April 1, 2012, through March 31, 2014⁵ at all six monitoring wells included in the evaluation. No potentially affected domestic or agricultural wells were identified based nitrate data. TDS concentrations either decreased or did not exhibit increases exceeding 20 percent for five of the six monitoring wells evaluated. At one of the six wells (MW-85S), the TDS concentration in Third Quarter 2014 increased 38 percent over the proposed maximum baseline TDS concentration reported for April 1, 2012 through March 31, 2014.⁵ However, the Third Quarter of 2014 concentration did not exceed the maximum historical TDS concentration reported for this well in October 2010.

Based on the evaluation presented in this report, the calculated TDS increase at MW-85S during the Third Quarter of 2014 (compared with the proposed maximum concentration from April 1, 2012, through March

² Pacific Gas and Electric Company. 2014. *Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b*. Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. August 14.

³ Regional Water Quality Control Board (Water Board). 2014. *Public review Opportunity, Implementation of Mitigation Measures Requiring Replacement Water for Impacts Due to Remedial Actions*, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. October 9.

⁴ ARCADIS. 2014. *Revised Report Of Waste Discharge for Proposed Agricultural Treatment Units*, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. May 28.

⁵ The methodology for evaluating TDS concentration increase over a baseline maximum TDS concentration reported during the previous eight quarters is currently a proposed methodology set forth in PG&E's August 14, 2014 submittal and which is subject to public review opportunity pursuant to the Water Board's October 9, 2014 publication.

31, 2014) is not considered to indicate an actually affected monitoring well. Available data indicate that TDS at MW-85S is associated with elevated TDS that was present in this area before ATU operations were initiated. Therefore, no potentially affected domestic or agricultural supply wells were identified based on monitoring well data.

Hydraulic Control

The area of hydraulic containment observed during this reporting period was comparable to (shallow zone of Upper Aquifer), or greater than (deep zone of Upper Aquifer), the Second Quarter of 2014 reporting period. Cumulative groundwater extraction rates increased during the Third Quarter of 2014 (1,339 gpm) compared to the Second Quarter of 2014 (1,154 gpm), as air temperatures and evapotranspiration rates continued their normal seasonal increase allowing for increased irrigation (and extraction) rates.

Aquifer Drawdown and Compliance with Mitigation Measure WTR-MM2c

The aquifer drawdown mitigation measure (WTR-MM-2c) is intended to establish baseline water levels in the area where domestic and agricultural wells are near remediation activities and to monitor those levels to establish whether remediation efforts are causing drawdown impacts to private supply wells. There are 20 privately owned active or inactive domestic and agricultural wells located within the WTR-MM-2c baseline sampling area.

As discussed in the Second Quarter of 2014 ATU Monitoring Report,⁶ PG&E has identified challenges with the methodology described in the EIR, which requires that manual water level measurements are obtained from private domestic and agricultural wells. For the reasons included in the Second Quarter of 2014 ATU Monitoring Report, PG&E continues to collect groundwater level data from monitoring wells near the private domestic and agricultural wells selected to monitor potential adverse drawdown impacts. This report summarizes the estimated trigger level elevations that would result in loss of 25 percent or more of the wetted screen interval of the private supply wells. During the Third Quarter of 2014, water level measurements from PG&E's monitoring wells indicate that no private domestic or agricultural supply wells were affected.

PG&E renews the request included in the Second Quarter of 2014 ATU Monitoring Report for Water Board approval to use monitoring wells near the domestic and agricultural wells identified in mitigation measure WTR-MM-2c for compliance with WTR-MM-2c to monitor for drawdown during this reporting period and future reporting periods instead of collecting groundwater level measurements at the private wells. PG&E believes this alternate method meets the intention of the mitigation measure WTR-MM-2c, providing more representative groundwater level data and without routine disruption to private well owners.

Please call Iain Baker at (415) 265-5196 if you have any questions regarding this report.

Sincerely,



Iain Baker on behalf of
Kevin Sullivan, P.E.,
Director Chromium Remediation
Hinkley Remediation Project

⁶ CH2M HILL and ARCADIS. 2014. Second Quarter of 2014 Agricultural Treatment Units Monitoring Report Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. August 20.

Report

**Third Quarter of 2014
Agricultural Treatment Units
Monitoring Report**

**Pacific Gas and Electric Company
Hinkley Compressor Station
Hinkley, California**

Prepared for
**California Regional Water Quality Control Board,
Lahontan Region**

on behalf of
Pacific Gas and Electric Company

November 20, 2014

CH2MHILL® and ARCADIS

Third Quarter of 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station Hinkley, California

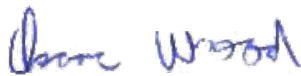
Prepared for
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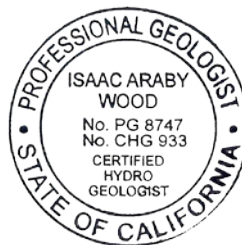
Prepared by
CH2M HILL and ARCADIS

November 20, 2014

This report was prepared under the supervision of the following California Registered Professionals:



Isaac Wood, P.G., CH2M HILL



Scott Seyfried, P.G., ARCADIS



Executive Summary

This monitoring report addresses the period from July 1 through September 30, 2014 (Third Quarter of 2014), and summarizes the results of operations, maintenance, and monitoring at the Agricultural Treatment Units (ATUs). This report is being submitted under the Monitoring and Reporting Program (MRP) specified in the ATU Waste Discharge Requirements (WDRs) set forth in California Regional Water Quality Control Board, Lahontan Region (Water Board), Board Order No. R6V-2014-0023 (Water Board, 2014a).

For the 3-month period ending September 30, 2014, the combined ATU discharge rate was 1,339 gallons per minute (gpm). The annual average pumping rate for the extraction wells discharging groundwater to the ATUs from October 1, 2013, through September 30, 2014, was 1,111 gpm. The total volume of groundwater applied to the ATUs during the reporting period was approximately 178 million gallons. The cumulative volume discharged to the ATUs from start-up through September 30, 2014, is approximately 3.0 billion gallons.

Important findings for the Third Quarter of 2014 are summarized in Table ES-1.

TABLE ES-1

Summary of Findings Agricultural Treatment Units

*Third Quarter of 2014 Agricultural Treatment Units Monitoring Report,
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

WDR and Order Requirement	Compliance
Facilities Monitoring	The ATUs were operated and monitored in compliance with the discharge specifications provided in the WDRs. During site inspections, no ponding more than 24 hours occurred, no issues were recorded at the perimeter site fencing, and ponded water did not leave the ATUs.
Plant Tissue Monitoring	No plant tissue sampling was conducted during the Third Quarter of 2014. The next plant tissue sampling is scheduled for the Fourth Quarter of 2014.
Soil Monitoring	Soil sampling for Cr(VI), Cr(T), and uranium was conducted in accordance with the WDRs. Cr(III) was calculated as the difference between Cr(VI) and Cr(T). Uranium concentrations ranged from 0.73 to 1.5 mg/kg. Cr(VI) concentrations were all non-detect. Cr(T) concentrations ranged from 2.6 mg/kg to 11 mg/kg and the calculated Cr(III) concentrations ranged from 2.5 to 10.9 mg/kg. The next soil sampling event is scheduled for the First Quarter of 2015.
Groundwater Monitoring	Monitoring well, extraction well, and combined effluent sampling for Cr(T), Cr(VI), nitrate, and TDS was performed in accordance with ATU WDRs to: <ul style="list-style-type: none"> • Develop baseline data to assess chromium remediation effectiveness • Develop baseline concentrations of ATU byproducts • Provide advance warning for domestic wells that could potentially be affected by remedial actions in the future.
WTR-MM-5 Byproducts Investigation Sampling	Monitoring wells, extraction wells, and combined irrigation water samples were analyzed as part of the year-long agricultural byproducts investigation being completed for EIR mitigation measure WTR-MM-5. WTR-MM-5 requires that TDS, dissolved uranium, and other radionuclide indicators (gross alpha and gross beta) are analyzed at sampling locations associated with existing ATUs quarterly for 1 year. The results of the agricultural byproducts investigation will be reported within three months of investigation completion in 2015.
Hydraulic Containment	The area of hydraulic containment observed during the reporting period was comparable to (shallow zone of Upper Aquifer), or greater than (deep zone of Upper Aquifer), the Second Quarter of 2014 reporting period. Cumulative groundwater extraction rates increased during the Third Quarter of 2014 (1,339 gpm) compared with the Second Quarter of 2014 (1,154 gpm) as air temperatures and evapotranspiration rates continued their normal seasonal increase allowing for increased irrigation (and extraction) rates.

TABLE ES-1

Summary of Findings Agricultural Treatment Units

*Third Quarter of 2014 Agricultural Treatment Units Monitoring Report,
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

WDR and Order Requirement	Compliance
Domestic and Agricultural Well Monitoring	Groundwater sampling activities were conducted in accordance with the WDRs for EIR Mitigation Measures WTR-MM-2a and WTR-MM-2b.
Chromium (WTR-MM-2a)	<p>The methodology for establishing pre-remedial reference values to identify actually affected domestic wells under this EIR mitigation measure is currently being discussed with the Water Board, per <i>Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California</i> (PG&E, 2014a). Identification of actually affected domestic wells under EIR mitigation Measure WTR-MM2a (if any) will be conducted upon Water Board approval of the methodology.</p> <p>There were no domestic wells with Cr(VI) or Cr(T) concentrations exceeding the background levels of 3.1 or 3.2 µg/L, respectively, for the first time (CH2M HILL, 2007). Two domestic wells (28-21 and 28-65) have previously exceeded Cr(VI)/Cr(T) concentrations of 3.1/3.2 µg/L. During the Third Quarter of 2014, well 28-21 did not exceed 3.1/3.2 µg/L concentrations (Table 6-2). PG&E purchased the property containing well 28-65 during the reporting period, so this well was not sampled. Therefore, no “actually affected domestic wells” were identified during the reporting period.</p> <p>A “potentially affected domestic well” is partially defined as a domestic supply well that has an increase in chromium concentrations due to remediation actions. The ATU WDRs do not specify what should be considered to be an “increase in chromium concentration” or what methods might be employed to make such a determination in the WTR-MM-2a domestic wells. Also, in the event that an increase in chromium concentration is identified, the ATU WDRs do not specify the methods to determine if the increase is due to remedial actions. Criteria and methodologies to make these determinations need to be developed. In the interim, for the current data set, a statistical evaluation of Cr(VI) trends was performed using data for all domestic wells in the WTR-MM-2a program with eight or more sample results between January 2011 and September 30, 2014. The trend analysis was conducted to identify domestic supply wells (if any) that might exhibit increasing chromium concentration trends. As summarized in this report the non-parametric Mann-Kendall statistical trend analysis of 60 domestic wells in the WTR-MM-2a area did not indicate increasing trends at any of these wells. Therefore, no potentially affected wells were identified.</p> <p>No potentially affected domestic wells were identified based on annual computer modeling conducted during the Second Quarter of 2014 (ARCADIS, 2014a).</p>
Agricultural Byproducts (WTR-MM-2b)	<p>As required in the WDRs, a year of baseline sampling for agricultural byproducts is being conducted to establish reference concentrations for TDS, nitrate, dissolved uranium, and other radionuclides. When the year of baseline sampling is completed, PG&E will be able to evaluate whether there are actually affected domestic wells. Because the 1 year of baseline sampling began during the Second Quarter of 2014 and has not been completed, there are no actually affected domestic or agricultural supply wells at this time.</p> <p>The methodology for establishing pre-remedial reference values to identify actually affected domestic, agricultural, and monitoring wells under this EIR mitigation measure is currently being discussed with the Water Board (PG&E, 2014a). Identification of actually affected monitoring wells (and domestic/agricultural supply wells once enough data are obtained) under EIR mitigation Measure WTR-MM2b (if any) will be conducted upon Water Board approval of the methodology.</p> <p>Nitrate and TDS data were evaluated at six monitoring wells outside of the hydraulic capture zone with at least four quarters of data available to estimate baseline conditions. Nitrate and TDS concentrations exceeded the MCL (10 mg/L as nitrogen) or SMCL (500 mg/L), respectively at all six monitoring wells during the proposed baseline monitoring period (April 1, 2012 through March 31, 2014)¹ used for initial comparison. During the Third Quarter of 2014, nitrate concentrations decreased from the proposed maximum baseline concentrations for all six wells. TDS concentrations either decreased or did not exhibit increases exceeding 20 percent for five of the six wells. At one of the six wells, MW-85S, the TDS</p>

¹ The methodology for evaluating TDS concentration increase over a baseline maximum TDS concentration reported during the previous eight quarters is currently a proposed methodology set forth in PG&E’s August 14, 2014 submittal and which is subject to public review opportunity pursuant to the Water Board’s October 9, 2014 publication.

TABLE ES-1

Summary of Findings Agricultural Treatment Units

*Third Quarter of 2014 Agricultural Treatment Units Monitoring Report,
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

WDR and Order Requirement	Compliance
Drawdown (WTR-MM-2c)	<p>concentration of 2,700 mg/L increased 38 percent over the proposed baseline period maximum TDS concentration of 1,960 mg/L (based on TDS data from April 1, 2012, through March 31, 2014) but did not exceed the maximum historical TDS concentration of 3,480 mg/L reported for this well in October 2010 (Appendix E, Table E-1). Based on the historically higher detection at this monitoring well in October 2010, compared with the Third Quarter of 2014 result (and additional evaluation), the TDS increase at MW-85S is not likely to be attributable to permitted ATU operations and is more likely a result of previously elevated TDS due to decades of previous agricultural operations in this area. Therefore, no potentially affected domestic or agricultural supply wells were identified due to ATU operations, based on the MW-85S monitoring well data.</p> <p>Further, no potentially affected domestic or agricultural supply wells were identified based on annual computer modeling (ARCADIS 2014a, b, c). The next computer modeling is scheduled for February 2015.</p> <p>The aquifer drawdown mitigation measure (WTR-MM-2c) is intended to establish baseline water levels in the area where domestic and agricultural wells are near remediation activities and to monitor those levels to establish whether remediation efforts are causing drawdown impacts to private supply wells. There are 20 privately owned active or inactive domestic and agricultural wells located within the WTR-MM-2c areas. The WDRs require that drawdown is monitored by collecting manual water level measurements at these private wells.</p> <p>PG&E has taken several actions to comply with the WDRs; however, well construction information is not available for 6 of the 20 supply wells, and there are no access points to obtain manual water levels at any of the 20 private supply wells. PG&E surveyed 19 of the 20 wells (one owner refused access) and determined that a significant well retrofitting effort, and disturbance of normal private well operations, would be required to make obtaining manual water level measurements possible. It is estimated that, after well retrofitting activities provided access for manual water level measurements, PG&E would need to coordinate with the private well owners each time a manual water level was needed and request that the well be shut off for 48 hours to obtain meaningful water level measurements.</p> <p>Because groundwater levels could not be obtained from the private supply wells, without significant disturbance to domestic or agricultural supply well operations, groundwater level data was collected from monitoring wells located near the private domestic and agricultural wells identified in mitigation measure WTR-MM-2c instead. The groundwater levels from the monitoring wells and the estimated trigger level elevations that would cause 25 percent or more of the private supply well wetted screens to become dry, indicate that no private domestic or agricultural supply wells were adversely affected by drawdown during the reporting period.</p>

Notes:

µg/L = micrograms per liter

ATU = Agricultural Treatment Unit

Cr(III) = trivalent chromium

Cr(T) = total dissolved chromium

Cr(VI) = hexavalent chromium

EIR = Environmental Impact Report

gpm = gallons per minute

MCL = maximum contaminant level

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

nitrate = nitrate as nitrogen

PG&E = Pacific Gas and Electric Company

SMCL = secondary maximum contaminant level

TDS = total dissolved solids

Water Board = California Regional Water Quality Control Board, Lahontan Region

WDRs = Waste Discharge Requirements

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Acronyms and Abbreviations

µg/L	micrograms per liter
ATU	Agricultural Treatment Unit
CADPH	California Department of Public Health
Cr(III)	trivalent chromium
Cr(T)	total dissolved chromium
Cr(VI)	hexavalent chromium
DVD	Desert View Dairy
DWR	Department of Water Resources
EIR	Environmental Impact Report
ft bgs	feet below ground surface
gpm	gallons per minute
LTU	land treatment unit
MCL	Maximum Contaminant Level
MG	million gallons
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mgd	million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MRP	Monitoring and Reporting Program
ND	non-detect
nitrate	nitrate as nitrogen
NWFI	Northwest Freshwater Injection
OU	Operable Unit
pCi/L	picocuries per liter
PG&E	Pacific Gas and Electric Company
ROWD	<i>Revised Report of Waste Discharge for Proposed Agricultural Treatment Units</i>
Site-wide GMP	Site-wide Groundwater Monitoring Program
SMCL	Secondary Maximum Contaminant Level
TDS	total dissolved solids
USEPA	U.S. Environmental Protection Agency
Water Board	California Regional Water Quality Control Board, Lahontan Region
WDR	Waste Discharge Requirement

SECTION 1

Introduction

This monitoring report is being submitted under the Monitoring and Reporting Program (MRP) specified in the Agricultural Treatment Unit (ATU) Waste Discharge Requirements (WDRs) set forth in California Regional Water Quality Control Board, Lahontan Region (Water Board), Board Order No. R6V-2014-0023 (Water Board, 2014a). Authorization to operate the ATUs was granted by the Water Board in the *Notice of Applicability of Waste Discharge Requirements for Agricultural Treatment Units*, dated August 1, 2014 (Water Board, 2014b). On October 1, 2014, the Water Board accepted the Southern Agricultural Treatment Unit Monitoring Program (Water Board, 2014c). The ATUs are components of the remedy for hexavalent chromium (Cr[VI]) remediation in groundwater at the Pacific Gas and Electric Company (PG&E) Compressor Station in Hinkley, California. This Third Quarter of 2014 Monitoring Report covers the period from July 1 through September 30, 2014 (Third Quarter of 2014). Figure 1-1 provides a location map for the site. This report was prepared on behalf of PG&E by CH2M HILL (contractor for ATU groundwater, soil, plant tissue, and compliance monitoring) and ARCADIS (contractor for ATU operations and operational compliance).

PG&E operates a gas compressor station at 35863 Fairview Road in Hinkley, San Bernardino County, California. The station began operating in 1952. The facility discharged cooling tower water containing Cr(VI) to evaporation ponds until 1964, when Cr(VI) was replaced by a different corrosion inhibitor. Ultimately, the ponds were taken out of service and replaced with new, lined evaporation ponds. Groundwater affected by Cr(VI) extends to the north and north-northwest from the compressor station.

Operating the ATUs involves extracting chromium-affected groundwater and applying this groundwater to cropland to grow fodder crops. ATU operations enhance both the hydraulic containment and treatment of groundwater affected with Cr(VI). Groundwater containing Cr(VI) is extracted by the ATU extraction wells, delivered to agricultural crops and used as irrigation water on the ATUs where it enters the root zone. Microbial activity in the root zone of the crops creates reducing geochemical conditions that reduce dissolved Cr(VI) to relatively insoluble trivalent chromium (Cr[III]), resulting in treatment of the extracted groundwater. As groundwater is extracted to provide irrigation water for these crops, a large area of hydraulic capture has developed providing hydraulic containment of the Cr(VI) plume.

The current ATU area consists of five ATUs comprising a combined area of approximately 249 acres. Figure 1-2 shows the location of the ATUs operating at the Site, which include the Desert View Dairy (DVD) (formerly permitted as a Land Treatment Unit [LTU]), Gorman ATU (Gorman North¹ and Gorman South²), Cottrell, Ranch, and Yang ATUs. During the Third Quarter of 2014, the Ranch ATU was expanded to include approximately 19 additional acres. This expansion increases the total area farmed at this ATU to approximately 61 acres. All currently active ATUs are considered to be within Operable Unit 2 (OU2). A large portion of the expanded Ranch ATU field area is within OU1, with a smaller portion located in OU2 (Figure 1-1); however, because groundwater extracted from OU2 provides irrigation water for the Ranch ATU, the Ranch ATU is considered to be a part of OU2.

Construction of the new Community East ATU, located south of Highway 58, also began during the Third Quarter of 2014. The Community East ATU is considered to be within OU1. Baseline groundwater sampling is being completed during the Fourth Quarter of 2014, and laboratory results of irrigation and receiving water quality will be provided in a separate notification no later than 2 weeks prior to Community East ATU startup, as required by Section I.B.5 of the WDR.

¹ Gorman North and Gorman South are collectively considered a single ATU.

² IBID.

Table 1-1 summarizes the chronology of operations and other general information for each ATU. General ATU information is summarized as follows in Exhibit 1-1.

EXHIBIT 1-1

Summary of General Information for the Agricultural Treatment Units

Component	DVD	Ranch	Gorman	Cottrell	Yang
Acreage	73	61	56	26	33
Operation began	September 2004	June 2011	March 2011	May 2011	April 2013
Irrigation system	Subsurface drip	Drag drip	Drag drip	Drag drip	Drag drip
Number of available extraction wells	12	5	Up to 14 extraction wells supply these 3 ATUs		

ATU = agricultural treatment unit

DVD = Desert View Dairy

The expansion of the Ranch ATU and construction of the Community East ATU are part of an additional 91 acres of ATU farming that were proposed in the *Revised Report of Waste Discharge for Proposed Agricultural Treatment Units, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California* (ROWD) (ARCADIS, 2014a). The additional 91 acres of farming will increase irrigation capacity, allowing for more groundwater extraction in areas with higher concentrations of Cr(VI), increases in year-round groundwater extraction rates, and enhancement of hydraulic containment and chromium treatment. The current and proposed acreages are within the WDR limit of 500 acres.

SECTION 2

ATU Monitoring, Extraction Rates, Volumes, and Maintenance

This section presents ATU site facilities monitoring observations, and operation and maintenance information for the DVD, Gorman, Cottrell, Ranch, and Yang ATUs as required by the MRP for the reporting period (Water Board, 2014a). Groundwater quality data for the ATU extraction wells and irrigation water are presented with the monitoring well groundwater data in Section 6.

2.1 Site Facilities Maintenance

Figure 1-1 shows the location of the ATUs. The ATUs were operated in compliance with WDRs during this reporting period. At least two times each week the ATUs are visually inspected with the following observations documented:

- Runoff and drainage at control facilities
- Perimeter site fencing condition
- Presence of ponding and signs of irrigation water runoff from fields

Table 2-1 presents the facility maintenance and operations log. The following were found during this reporting period:

- No ponding of a duration more than 24 hours occurred
- No breaches or other issues were recorded at the perimeter site fencing
- Runoff did not leave the ATUs

To control root intrusion into the DVD ATU subsurface drip irrigation system, a hydrogen peroxide and citric acid solution treatment was performed once during this reporting period. This treatment was applied in areas where root intrusion had previously occurred. The event was conducted on September 23 to 25.

Table 2-1 provides the quantities of the chemicals used.

2.1.1 Expansion of the Ranch ATU

Expansion of the Ranch ATU was completed during the Third Quarter of 2014. Prior to Ranch ATU expansion, an old agricultural supply well (26-28) located within the expansion area was abandoned on August 28, 2014. The log for the well abandonment is included in Appendix A. As described in the ROWD (ARCADIS, 2014a), current extraction wells (IW-01, IW-02, IW-03, EX-29, and EX-30) will continue to provide water to the proposed Ranch ATU; hence, additional extraction wells and piping are not currently planned. However, groundwater extracted from these and other extraction wells located south of the railroad tracks may also be applied to the northern ATUs (i.e., the DVD, Yang, Cottrell, or Gorman ATUs), as needed, to optimize chromium mass removal and hydraulic capture. In addition, groundwater extracted from the DVD extraction wells (or other wells north of the railroad tracks) may be applied to Ranch ATU if the need arises. In the current pumping plan, groundwater extracted from EX-29 and EX-30 will be routed to the South Central ReInjection Area In Situ Reactive Zone as needed when the agricultural water demand at the Ranch ATU is low.

The original Ranch ATU covered approximately 41.7 acres and used drag-drip irrigation. The expansion adds approximately 19.4 acres around the original Ranch ATU (Figure 2-1), for a total area of approximately 61.1 acres. This expansion was accomplished by extending the current center pivot radius and adding articulating pivot ends that can reach and irrigate the irregularly shaped expansion area.

The original pivot radius was 760 feet, whereas the expanded Ranch ATU has a maximum radius of 1,018 feet. The expanded Ranch ATU will continue to use drag-drip irrigation to prevent aerial spraying of groundwater. Construction of the expansion began on August 18, 2014, and was completed in September 2014. The expanded Ranch ATU started up on September 15, 2014. The flow rate for irrigation water during the first approximately 2 weeks of operation (September 15 to 30) was an average of 311 gallons per minute (gpm). No significant ponded water or runoff occurred. As-built construction diagrams will be provided in the Fourth Quarter of 2014 ATU Monitoring Report.

2.1.2 Construction of Community East ATU

Construction of the Community East ATU began during the Third Quarter of 2014 with the construction of four extraction wells (SAU-EX-01 through SAU-EX-04; Figure 2-1). Extraction well development and construction of the Community East ATU will continue during the Fourth Quarter of 2014. In addition, four new monitoring wells for the southern ATUs will be installed per Water Board approval of the Southern ATU monitoring plan dated October 1, 2014 (Water Board, 2014c). Boring logs and well construction information will be provided in the Fourth Quarter of 2014 ATU monitoring report. Extracted Groundwater Flow Rates and Volumes

Figure 1-2 shows the location of the ATUs and the extraction well network available to supply irrigation water to them. The extraction rates for individual extraction wells supplying irrigation to the ATUs and the cumulative rates (and volume) of groundwater applied to each ATU are frequently monitored. The site supervisory control and data acquisition system collects and records flow rate and totalizer data at a frequency of every minute for most wells. In addition, field totalizer data are collected and recorded by field staff on a weekly or biweekly basis.

Table 2-2 presents the average monthly pumping rates for ATU supply wells. Table 2-3 presents the total monthly volumes and cumulative volume extracted from extraction wells for the Third Quarter of 2014 and since start-up. Table 2-4 presents the total monthly volumes and cumulative volume discharged to the ATUs for the Third Quarter of 2014 and since start-up. Table 2-5 compares the Third Quarter of 2014 discharge rates at individual ATUs to the rates from the previous Second Quarter of 2014 and the current quarter of the previous year (Third Quarter of 2013). Tables showing the historical pumping rates and volumes discharged at the ATUs since start-up are included in Appendix A.

Flow rates and volumes include the following:

- The average pumping rate for the past 12 months (October 2013 through September 2014) across all the ATUs was 1.600 million gallons per day (mgd) or 1,111 gpm.
- Third Quarter of 2014 discharge rates (cumulative rate of 1,339 gpm) are generally higher than the Second Quarter of 2014 discharge rates (cumulative rate of 1,154 gpm) due to seasonal changes in irrigation rates as temperatures increase throughout the summer months.
- The cumulative volume of groundwater discharged to the ATUs from start-up through September 30, 2014, was approximately 3.00 billion gallons.

The Third Quarter of 2014 rates discharged to individual ATUs were within 50 percent of the Third Quarter of 2013 rates discharged at four (DVD, Cottrell, Gorman, and Ranch) of the five ATUs. The 355 percent increase in flow rate at the Yang ATU compared with the Third Quarter of 2013 reflects the shutdown of Yang during most of the Third Quarter of 2013 as the full-scale system was being constructed. The Third Quarter of 2014 discharge rates are within the agronomic rates. The term “agronomic rate” refers to a rate of irrigation water applied that provides the needed amount of water and nutrient loading which grasses and crops require while minimizing excess water or nutrients percolating beyond the root zone. An agronomic rate performance report will be submitted at the end of the year.

2.2 Groundwater Flow Tracers

No groundwater flow tracers were discharged to groundwater during the reporting period. As specified in Board Order No. R6V-2014-0023, monitoring of groundwater flow tracers will be identified in a tracer study plan submitted to the Water Board before tracers are discharged to the aquifer.

2.3 Well Rehabilitation Chemicals

No chemical well rehabilitation was conducted during the reporting period. A tabulation of volumes of well rehabilitation chemicals historically used is presented in Table 2-6. During the Second Quarter of 2014, NuWell 120™ and NuWell 310™ were used to chemically rehabilitate extraction wells that will be used to supply water to the future Southern ATUs (EX-02, X-4, X-5, X-8, X-9, X-12, and X-13). As clarified in the *Response to Response to Comments on Second Quarter of 2014 Agricultural Treatment Units Monitoring Report* dated November 3, 2014 (PG&E, 2014c), NuWell 120™ contains 65 to 80 percent by weight food-grade phosphoric acid. Because phosphoric acid is on the list of approved well chemicals and compounds in Section II of the Agricultural Treatment Unit (ATU) Waste Discharge Requirements (WDR) Monitoring and Reporting Program (ATU MRP), the use of NuWell 120™ is compliant with the WDR, and orthophosphate is an appropriate marker constituent. NuWell 310™ is a proprietary polymeric acid. Nu-Well 310™ is certified to National Sanitation Foundation (NSF)/American National Standards Institute (ANSI) Standard 60 – Drinking Water Treatment Chemicals – Health Effects for use in potable well cleaning, pipeline cleaning, and filter cleaning. The MRP states: “Commercial mixtures of rehabilitation compounds that carry the following certifications/registrations valid in the state of California by the NSF may be used: NSF/ANSI 60-2005 (Drinking Water Treatment Chemicals –Health Effects): compounds with this certification are routinely used for rehabilitation of drinking water wells in California under the California Waterworks Standard” (California Code of Regulations Title 22, Section 64590: Direct Additives). Accordingly, the use of NuWell 310™ is compliant with the ATU MRP.

Sampling for orthophosphate as a marker constituent for this mixture of well rehabilitation chemicals was conducted during the Third Quarter of 2014, as discussed in Section 5.6.

Hydraulic Monitoring

This section presents hydraulic monitoring data for the Third Quarter of 2014 and a comparison of hydraulic containment during the current quarter compared to the previous quarter.

3.1 Hydraulic Monitoring Data and Aquifer Characteristics

The hydraulic gradients in the ATU area and the inferred capture zone from extraction wells are based on the groundwater levels measured in the shallow and deep zone wells of the Upper Aquifer, as shown on Figures 3-1 and 3-2, respectively. Average groundwater elevations during this reporting period were calculated by averaging pressure transducer data recorded at 30-minute intervals from July 1 through July 31, 2014. Additional manual water level data collected between July 1 and August 7 were also included on the groundwater contour maps to provide a more complete understanding of groundwater gradients. Groundwater field parameter data (called "Aquifer Characteristics" in Table E-6 of the MRP) and groundwater levels collected for ATU monitoring are provided in Tables B-1 and B-2 of Appendix B, respectively.

3.2 Hydraulic Control and Containment

Hydraulic containment continues to be achieved with year-round operation of numerous supply wells for the ATUs (DVD, Cottrell, Ranch, Gorman [Gorman North and Gorman South], and Yang) (Figures 3-1 and 3-2). During this reporting period, hydraulic containment of the western portion of the chromium plume was also achieved by groundwater extraction for the ATUs and Northwest Area extraction wells (pumping center) east of the Northwest Freshwater Injection (NWFI) system with localized freshwater injection at the NWFI system. During the Third Quarter of 2014, approximately 10.4 million gallons of freshwater were injected into six of the seven available NWFI wells, and more than 187 million gallons³ of groundwater were extracted from within the pumping center to supply the ATUs (extraction wells shown as gold shaded squares in the ATU areas shown on Figures 3-1 and 3-2) (CH2M HILL and ARCADIS, 2014a).

Evaluation of groundwater elevations and hydraulic gradients indicates that hydraulic control has been maintained over the shallow and deep zones of the Upper Aquifer, as shown by the dark blue dashed lines on Figures 3-1 and 3-2, respectively. During the Third Quarter of 2014, the area of hydraulic control in the shallow zone of the Upper Aquifer was comparable to the Second Quarter of 2014, as shown by the dashed pink lines (Second Quarter of 2014 capture zone) on Figure 3-1. During the Third Quarter of 2014, the area of hydraulic control in the deep zone of the Upper Aquifer was greater than the Second Quarter of 2014, as shown on Figure 3-2; this was due to increased groundwater extraction rates for the summer farming season.

³ The combined groundwater extraction volume within the pumping center includes supply wells for the ATUs and the Northwest Area extraction wells (EX-15, EX-16, EX-20, EX-29, and EX-30) that convey groundwater to the South Central In Situ Reactive Zone for treatment.

Plant Tissue and Soil Sample Analytical Results

This section discusses plant and soil analytical results for the Third Quarter of 2014.

4.1 Plant Tissue Results

Plant tissue sampling did not occur during the Third Quarter of 2014. The next semiannual plant tissue sampling event is scheduled for the Fourth Quarter of 2014.

4.2 Soil Results

The MRP requires collecting and analyzing soil samples at existing and new ATUs. For existing ATUs (OU2), soil samples from DVD, Gorman (North and South), Cottrell, Ranch, and Yang ATUs are collected at a rate of approximately one sample location per 20 field acres. These soil samples are collected at depths of 0.5 and 5 feet below ground surface (ft bgs). The soil samples from 0.5 ft bgs are analyzed for uranium (soluble salts) twice yearly. The soil samples from 0.5 and 5 ft bgs are analyzed for total dissolved chromium (Cr(T)) and Cr(VI) once every 2 years. The MRP specifies that Cr(III) (insoluble salts) should be sampled, but standard commercial analyses for Cr(III) for soil are unavailable. Therefore, Cr(III) is calculated as the difference between Cr(T) and Cr(VI). Extraction methods, analytical methods, and reporting limits are provided in Table 4-1.

During the Third Quarter of 2014, soil sampling for existing ATUs (OU2) was performed in July 2014. Figure 4-1 shows the soil sampling locations, and Table 4-2 summarizes the analytical results. Soil laboratory analytical results are included in Appendix C. The next ATU soil sampling event is scheduled for the First Quarter of 2015. Thirteen soil samples were collected from 0.5 ft bgs and were analyzed for uranium. Twenty-six soil samples were collected at depths of 0.5 and 5 ft bgs and were analyzed for Cr(VI) and Cr(T); Cr(III) concentrations for these samples were also calculated as the difference between Cr(T) and Cr(VI). The uranium concentrations ranged from 0.73 to 1.5 milligrams per kilogram (mg/kg). Cr(VI) concentrations were all non-detect. Cr(T) concentrations ranged from 2.6 to 11 mg/kg, and the calculated Cr(III) concentrations ranged from 2.5 to 10.9 mg/kg.

Baseline soil sampling for OU1 Southern ATUs will begin during the Fourth Quarter of 2014. For the proposed new Southern ATUs (OU1), prior to and during remediation, samples will be collected from 0.5 and 5 ft bgs at a rate of one sample location per 20 field acres. The soil samples from 0.5 ft bgs will be analyzed for uranium (soluble salts) twice yearly and inorganic arsenic and manganese on a yearly basis. The samples from 0.5 and 5 ft bgs will be analyzed for Cr(T) and Cr(VI) on a yearly basis. The MRP specifies that Cr(III) (insoluble salts) should be sampled, but standard commercial analyses for Cr(III) for soil are unavailable. Cr(III) will be calculated as the difference between Cr(T) and Cr(VI). Extraction methods, analytical methods, and reporting limits are provided in Table 4-1.

The MRP also requires statistical analysis of soils data to determine whether significant changes are occurring. Statistical analysis will begin when a statistically sufficient dataset (8 monitoring events) are available, and the methodology for statistical analysis will be summarized at that time.

Groundwater Monitoring of ATU Water Quality

This section summarizes the ATU monitoring programs in place for compliance with the MRP specified in Board Order No. R6V-2014-0023 (Water Board, 2014a; Water Board, 2014b). This section also presents the groundwater analytical results for extraction wells, irrigation water, and monitoring wells listed in the MRP, Table E-2 and E-3 (Water Board, 2014a) for the existing ATUs. Groundwater results for the ATU extraction wells and selected domestic and agricultural are also presented on the figures in this section for reference purposes. Domestic and agricultural supply well analytical data are presented in Section 6.

Groundwater sampling, laboratory analysis, and data management are conducted according to the methods and procedures established for the Site-wide Groundwater Monitoring Program (Site-wide GMP; CH2M HILL, 2014a) and applicable procedures described in the PG&E Program Quality Assurance Project Plan (CH2M HILL, 2013). Table 4-1 lists the laboratory analytical methods and reporting limits.

5.1 Pre-Remediation Water Quality Conditions

Unrelated to ATU operations, nitrate as nitrogen (nitrate) and total dissolved solids (TDS) concentrations are above the drinking water primary Maximum Contaminant Level (MCL) or secondary Maximum Contaminant Level (SMCL) in much of the Hinkley Valley, including the existing ATU areas. The primary sources of nitrate and TDS appear to be related to historical dairy and other livestock operations, decades of agricultural operations (including application of fertilizers and manure spreading), and septic systems located on private properties (CH2M HILL, 2014b).

Uranium and gross alpha are also present above the drinking water MCLs at many monitoring locations; however, these constituents are naturally occurring in Mojave Desert soils and rocks and are not present as a result of PG&E's remedial actions or compressor station operations (CH2M HILL, 2012; Water Board, 2014a).

Additional chromium, nitrate, TDS, and radionuclide data is provided in the following prior reports:

- *Agricultural Treatment Unit Report of Waste Discharge (ROWD) Addendum #3: Groundwater Modeling Evaluating Existing Nitrate and Total Dissolved Solids. Hinkley Compressor Station. Hinkley, California* (ARCADIS, 2014b)
- *Addition to Agricultural Treatment Unit Report of Waste Discharge Addendum #3: Groundwater Modeling Evaluating Existing Nitrate and Total Dissolved Solids on July 29* (ARCADIS, 2014c)
- *Second Quarter 2014 Groundwater Monitoring Report and Domestic Well Sampling Results* (CH2M HILL, 2014a)
- *Hinkley Area Nitrate Data Summary and Distribution through Fourth Quarter 2013, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*, where a larger dataset was used to develop nitrate contours site-wide (CH2M HILL, 2014b)
- *Radionuclide Data Summary Report, Pacific Gas and Electric Company Hinkley Compressor Station, Hinkley, California* (CH2M HILL, 2012)

5.2 Agricultural Byproducts Investigation (WTR-MM-5)

During the reporting period, ATU monitoring wells, additional monitoring wells, extraction wells, and the combined effluent (irrigation water) were sampled for analytes in the agricultural byproducts investigation being completed for the Environmental Impact Report (EIR) mitigation measure WTR-MM-5 (ICF International, 2013). Mitigation measure WTR-MM-5 requires that TDS, dissolved uranium, and other radionuclides (gross alpha and gross beta) be sampled at extraction wells and irrigation water sampling

locations associated with existing ATUs quarterly for 1 year. The investigation is estimated to be completed by March 31, 2015, when the results from four quarters of sampling have been validated. The Water Board will be notified of the completion of the investigation within 2 weeks (estimated to be April 14, 2015) via e-mail, per the requirement in the ATU Notice of Applicability (Water Board, 2014b). The results of the agricultural byproducts sampling will be reported within 3 months of completion of the investigation (report estimated to be submitted to Water Board by June 30, 2015).

5.3 Irrigation Water Quality

Table 5-1 presents the groundwater quality results for irrigation water applied to each ATU during the reporting period (Third Quarter of 2014) and the previous three quarters (12-month period). Appendix C contains laboratory analytical reports for irrigation water over the reporting period, and Appendix D contains historical groundwater quality data and trend graphs for the ATU irrigation water samples.

Irrigation water analytical results represent the combined groundwater quality from extraction wells supplying water to the ATU at the time of sampling; therefore, the water quality results for each irrigation water sample are variable from quarter to quarter depending on the extraction wells in use and flow rates during the time of sample collection. Irrigation water samples were analyzed for Cr(T), Cr(VI), nitrate, TDS, uranium, gross, alpha, and gross beta. As shown in Table 5-1 and the trend graphs in Appendix D, the Third Quarter of 2014 irrigation water results were generally comparable to previous monitoring data. Third Quarter of 2014 irrigation water analytical results for ATU irrigation water are summarized as follows:

- The maximum reported Cr(VI) and Cr(T) concentrations for the ATUs were 23.0 and 24.0 micrograms per liter ($\mu\text{g/L}$), respectively, at the Ranch ATU.
- The maximum reported nitrate and TDS concentrations for the ATUs were 17.0 and 2,800 milligrams per liter (mg/L) respectively, at the Gorman-North ATU.
- The maximum reported radionuclide concentrations for the ATUs were as follows:
 - Dissolved uranium: 60.0 picocuries per liter (pCi/L) at the DVD ATU
 - Gross alpha: 71.1 pCi/L at the DVD ATU
 - Gross beta: estimated 12.0 pCi/L at the Gorman-South ATU

5.4 Monitoring and Extraction Well Water Quality

Table 5-2 lists the groundwater monitoring wells and analytical program listed in the ATU WDR MRP, Table E-2 (Water Board, 2014a) for monitoring groundwater quality associated with operation of the existing ATUs. The MRP requires sampling frequencies of semiannual or quarterly and varies by well per the MRP for Cr(T), Cr(VI), nitrate, and TDS. In general, the frequency is semiannual at monitoring wells upgradient of an ATU and quarterly at most monitoring wells located downgradient of an ATU or near the ATU field area. During the Third Quarter of 2014, samples for radionuclides (including dissolved uranium, gross alpha, and gross beta) and TDS were also collected to comply with the byproducts investigation in mitigation measure WTR-MM-5. Water levels and field parameters are also required on a quarterly or semi-annual basis in Table E-6 of the MRP.

Table 5-3 presents the groundwater quality results for extraction wells and Table 5-4 lists the water quality results for the ATU compliance monitoring well groups for the Third Quarter of 2014 and previous three quarters (12-month period). Appendix D contains historical groundwater quality data for the ATU extraction wells. Appendix E contains historical groundwater analytical data for the ATU monitoring wells.

Appendix E also includes groundwater analytical results for samples collected from additional wells to establish baseline monitoring conditions in the existing ATU areas and proposed new southern ATU areas. Appendix E also contains maps showing the distribution of nitrate, TDS, and radionuclides in the southern ATU areas.

Figures illustrating the distribution of chromium, nitrate, TDS, and radionuclides, analytical results for monitoring wells and extraction wells in the existing ATU program, with the private domestic and agricultural supply wells located in the northern ATU areas posted for reference (but not included in contouring), consist of the following:

- Figures 5-1 and 5-2 show the 3.1-, 10-, 100-, and 1,000- $\mu\text{g/L}$ chromium isoconcentration contours for the shallow and deep zones of the Upper Aquifer, respectively. These contours were developed from a larger dataset previously presented in the Site-wide GMP Report (CH2M HILL, 2014a).
- Figures 5-3 and 5-4 show the 10-, 25-, and 50-mg/L nitrate isoconcentration contours for the shallow and deep zones of the Upper Aquifer, respectively.
- Figures 5-5 and 5-6 show the 500-, 1,000-, and 2,500-mg/L TDS isoconcentration contours for the shallow and deep zones of the Upper Aquifer, respectively, for the ATU areas.
- Figures 5-7 and 5-8 show the dissolved uranium, gross alpha, and gross beta results for the shallow and deep zones of the Upper Aquifer, respectively.

ATU extraction well data posted on maps showing the shallow and deep zones of the Upper Aquifer may not represent the monitoring zone where these wells are shown. Many of the ATU extraction wells are cross-screened across both the shallow and deep zones of the Upper Aquifer, so the water quality results from some of these wells represent a combination of both zones rather than a discrete monitoring depth like monitoring well data.

The minimum, maximum, and average Cr(VI), nitrate, TDS, and radionuclide concentrations for ATU monitoring wells in the Third Quarter of 2014 include those listed in Exhibit 5-1.

EXHIBIT 5-1

Third Quarter of 2014 Minimum, Maximum, and Average Concentrations for the ATU Monitoring Well Groups shown in Table 5-4

Constituent		DVD	Ranch	Gorman	Cottrell	Yang
Cr(VI) ($\mu\text{g/L}$)	Minimum	0.57	5.4	ND (0.06)	ND (0.06)	0.2
	Maximum	45	35	4.7	12	7.6
	Average	7.1	19.5	1.6	4.1	3.7
Nitrate (mg/L)	Minimum	6.2	4.3	ND (0.05)	0.43	5.7
	Maximum	68	17	57	40	19
	Average	28.1	11.1	11.4	20.6	13
TDS (mg/L)	Minimum	820	640	240	520	890
	Maximum	5,700	1,200	6,600	4,000	3,400
	Average	3,000	1,030	2,270	2,530	1,620
Gross alpha (pCi/L)	Minimum	16.6	28.2 J	ND (17.2)	9.25	23.7
	Maximum	209	47.6	63.4	73.0J	173 J
	Average	73.5	40.5	25	55.8	60.8
Gross beta (pCi/L)	Minimum	ND (12.9)	4.03	ND (19.0)	4.17	ND (22.0)
	Maximum	21.1	7.1	20.4	13.3	7.56
	Average	8.72	5.7	7.11	9.02	5.69

EXHIBIT 5-1

Third Quarter of 2014 Minimum, Maximum, and Average Concentrations for the ATU Monitoring Well Groups shown in Table 5-4

Constituent		DVD	Ranch	Gorman	Cottrell	Yang
Dissolved uranium (pCi/L)	Minimum	13.0	27.0	1.9	7.2	20.0
	Maximum	140	40.0	77.0	65.0	100
	Average	68.9	36.2	27.0	44.3	45.3

Note: **Bold** results indicate the maximum average concentration for each well group and analyte in the ATUs.

µg/L = micrograms per liter

ATU = agricultural treatment unit

Cr(VI) = hexavalent chromium

DVD = Desert View Dairy

J = concentration is estimated based on review of quality control criteria and data validation

mg/L = milligrams per liter

ND = non-detect

nitrate = nitrate as nitrogen

pCi/L = picocuries per liter

TDS = total dissolved solids

General results and findings for this reporting period are as follows:

- The highest average chromium concentrations were reported at the southernmost Ranch ATU and the lowest average chromium concentrations were reported for the northern Gorman ATU.
- Nitrate concentrations exceeding the California Department of Public Health (CADPH) MCL of 10 mg/L as nitrogen are prevalent at most monitoring wells located upgradient, cross-gradient, and downgradient of all ATUs; the highest nitrate concentrations are generally reported for wells screened across the shallow zone of Upper Aquifer (CADPH, 2014).
- TDS concentrations exceeding the State of California SMCL of 500 mg/L are prevalent at most monitoring wells located upgradient, cross-gradient, and downgradient of all ATUs (CADPH, 2014). The highest TDS concentrations at all ATUs are generally reported for wells screened across the shallow zone of Upper Aquifer.
- Gross alpha concentrations exceeding the State of California MCL of 15 pCi/L are common at most monitoring wells located upgradient, cross-gradient, and downgradient at the ATU areas (CADPH, 2014). During the Second Quarter of 2014 monitoring event, laboratory analysis of gross alpha was performed using two U.S. Environmental Protection Agency (USEPA)-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, the gross alpha results reported using USEPA Method 900.0 were determined to be more accurate and representative of site conditions. Uranium typically emits the largest quantities of gross alpha, and therefore, the gross alpha results should be generally equal to or slightly higher than the corresponding dissolved uranium result. Gross alpha results obtained using USEPA Method 900.0 were generally equal to or exceeded the corresponding dissolved uranium results, while gross alpha obtained using Method 7110C results were lower than the corresponding dissolved uranium results, indicating potential interference during laboratory analysis. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. In Table 5-4 the minimum, maximum, and average calculations only consider USEPA Method 900.0 results.
- Gross beta concentrations did not exceed the State of California MCL of 50 pCi/L at the ATU areas (CADPH, 2014).

- Dissolved uranium concentrations exceeding the State of California MCL of 20 pCi/L are common at most monitoring wells located upgradient, cross-gradient, and downgradient of the ATU areas (CADPH, 2014). The maximum concentrations at the ATUs were generally reported for wells screened across the shallow zone of Upper Aquifer.

As listed previously and discussed in Section 5.1, most of the monitoring wells in the existing ATU areas contain nitrate, TDS, uranium, or other radionuclide concentrations above their respective MCL or SMCLs. Potential sources causing pre-existing elevated concentrations of these constituents include historic land use for nitrate and TDS. Uranium and radionuclides in the Upper Aquifer may be elevated due to both historic land use and naturally occurring minerals and rocks in the aquifer containing uranium and radionuclides.

5.5 Receiving Water Limitations

As listed in the WDRs Section D Receiving Water Limitations, no exceedances of receiving water limitations occurred at the existing ATUs during the Third Quarter of 2014 (Water Board, 2014a). As clarified in the *Notice of Applicability of Waste Discharge Requirements for Agricultural Treatment Units (WDID 6B361403002, Board Order No. R6V-2014-0023)*, because TDS concentrations already exceeding drinking water standards are present in the existing ATUs areas (OU2), evaluation of Receiving Water Limit 3 associated with increases in TDS concentrations does not apply (Water Board, 2014b) to the currently operating ATUs in OU2. Similarly, the Receiving Water Limit 4 regarding evaluation of increases in nitrate concentrations also does not apply to the existing ATUs (Water Board, 2014b). TDS and nitrate monitoring will continue, but the evaluation and action plans triggered by Limit 3 and Limit 4 in the MRP will not apply unless monitoring wells are measuring discharge from new ATUs. The first time that the ATU monitoring wells were sampled for dissolved uranium and other radionuclides was during the Second Quarter of 2014; therefore, no inferences into receiving water quality effects can be made at this time. Uranium and other radionuclides will be evaluated against Receiving Water Limit 5 as part of the mitigation measure WTR-MM-5 investigation after four quarters of data are available in 2015.

Appendix B (Table B-1) contains the field parameter results for the groundwater monitoring and extraction wells. The discharge of irrigation water to the ATUs did not cause the receiving water pH to go below 6.5 or above 8.5 pH units during this reporting period. Most wells have pH concentrations that are within the limits (6.5 to 8.5) listed in the MRP. Some of the ATU area monitoring wells have pH concentrations of less than 6.5 pH units and a few have pH concentrations of more than 8.5 pH units; however, these monitoring wells exhibited pH concentrations above or below this range before ATU operations were initiated and reflect natural conditions.

5.6 Well Rehabilitation Chemical Monitoring

During the Third Quarter of 2014, 17 monitoring wells were sampled for the marker constituent orthophosphate, as displayed in Table 5-5. These 17 wells were selected for sampling because they are located within 500 feet downgradient or cross-gradient of the seven extraction wells where chemical rehabilitation was completed during the Second Quarter of 2014 (see Section 2.4), per MRP requirement II.a.ii and are screened in a similar aquifer zone. During the Third Quarter of 2014, samples from only two wells (SA-MW-26D and CA-MW-106S) contained orthophosphate concentrations that exceeded the standard reporting limit of 0.1 mg/L (Table 5-9). The sample from SA-MW-26D contained 0.12 mg/L orthophosphate, and the sample from CA-MW-106S contained 0.29 mg/L. No action is required as a result of these low detections. This set of monitoring wells will be sampled again for orthophosphate during the Fourth Quarter of 2014. If orthophosphate is not detected for two consecutive quarters at a particular well, then orthophosphate sampling at that well will be discontinued per MRP requirement II.a.iii.

Domestic and Agricultural Well Monitoring

Domestic and agricultural supply wells are monitored both before operation of the new ATUs and during operation of existing ATUs in accordance with the MRP presented in Attachments E and F of the WDR, respectively (Water Board, 2014a). As described in Appendix F of the WDR (Water Board, 2014a), mitigation measure WTR-MM-2 addresses impacts to domestic and agricultural supply wells by the operation of ATUs and includes three components:

- Impacts of chromium on domestic supply wells (WTR-MM-2a)
- Impacts of byproducts from ATUs on domestic and agricultural supply wells (WTR-MM-2b)
- Impacts of groundwater drawdown by ATU extraction on domestic and agricultural supply wells (WTR-MM-2c)

This section presents the monitoring programs in place for these mitigation measures, the Third Quarter of 2014 monitoring data, and evaluation of the data for these mitigation measures.

6.1 Analysis of Whether Any Domestic Supply Wells Are Affected by Chromium Plume Expansion due to Remediation (WTR-MM-2a)

6.1.1 Domestic and Agricultural Supply Well Chromium Monitoring

Domestic supply wells potentially affected by chromium plume movement due to remedial actions were sampled for chromium analysis as required by mitigation measure WTR-MM-2a. As described in the ROWD, the 1-mile area specified in the mitigation measure is shown on Figure 6-1; active and inactive domestic wells within the area are also shown on Figure 6-1. This area is defined as 1 mile in the cross-gradient and downgradient directions around the contiguous plume boundary generally south of Thompson Road, as delineated in the Second Quarter of 2014 (CH2M HILL, 2014b). This area excludes the area to the southwest of the Lockhart Fault, which is upgradient of the current and proposed new ATUs. Appendix F, Table F-1 summarizes the mitigation measure WTR-MM-2a wells that were not sampled during the reporting period for various reasons. Appendix F, Table F-2 lists domestic and agricultural wells on properties purchased by PG&E during the reporting period. Appendix F, Table F-3 summarizes historical analytical results for domestic and agricultural wells.

6.1.2 Domestic and Agricultural Supply Well Chromium Results and Analysis

EIR mitigation measure WTR-MM-2a requires the determination of whether any domestic supply wells are actually affected by chromium plume movement due to remedial actions by operating existing ATUs under the ATU WDRs. Details on the criteria evaluated are summarized in Table 6-1. This mitigation measure defines actually and potentially affected domestic wells as domestic supply wells that have an increase in chromium concentrations due to remedial actions. The methodology for establishing pre-remedial reference values to identify actually affected domestic wells under this EIR mitigation measure is currently being considered by the Water Board, per *Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California* (PG&E, 2014a). Identification of actually affected domestic wells under EIR mitigation measure WTR-MM2a (if any) will be conducted upon Water Board approval of the methodology.⁴

⁴ In addition, the methodologies for implementation of mitigation measures WTR-MM-2a and WTR-MM-2b are subject to a petition "In the Matter of Lahontan Regional Water Quality Control Board Resolution No. R6V-2013-0060 Certifying a Final Environmental Impact Report" which is currently in abeyance. *Petition ID A-2266: Petition for Review; Request to Hold Petition in Abeyance* (PG&E, 2013).

The maximum background levels for Cr(VI) and Cr(T) are currently defined as 3.1 and 3.2 µg/L, respectively (CH2M HILL, 2007). Chromium sample results starting in April 2012 through the reporting period are listed in Table 6-2. Historical chromium results for the domestic wells in WTR-MM-2a are provided in Appendix F, Table F-3.

As shown in Table 6-1, criteria for an “actually affected domestic well” is a domestic well located within 1 mile downgradient or cross-gradient of the defined chromium plume with one of the following characteristics:

- Cr(VI) or Cr(T) concentrations that exceed maximum background levels for the first time (if the well previously had concentrations below maximum background levels)
- Cr(VI) or Cr(T) concentrations that increase by 10 percent or more (if the well previously had concentrations that exceeded maximum background levels)

During the Third Quarter of 2014, there were no domestic wells with Cr(VI) or Cr(T) concentrations that exceeded background concentrations (CH2M HILL, 2007) of 3.1 or 3.2 µg/L respectively, for the first time. Two domestic wells (28-21 and 28-65) have previously exceeded Cr(VI)/Cr(T) concentrations of 3.1/3.2 µg/L. During the Third Quarter of 2014, well 28-21 did not exceed 3.1/3.2 µg/L concentrations (Table 6-2). PG&E purchased the property containing well 28-65 during the reporting period, so this well was not sampled. Therefore, no “actually affected domestic wells” were identified during the reporting period.

A “potentially affected domestic well” is defined as a domestic supply well that has an increase in chromium concentrations due to remediation actions and which:

- Is located within 1-mile of the defined chromium plume; or
- Is predicted to have any of the conditions for an “actually affected domestic well” within one year, as indicated by groundwater modeling.

The ATU WDRs do not specify what should be considered to be an “increase in chromium concentration” or what methods might be employed to make such a determination. Also, in the event that an increase in chromium concentration is identified, the ATU WDRs do not specify the methods to determine if the increase is due to remedial actions. Criteria and methodologies to make these determinations need to be developed. In the interim, for the current data set, a statistical evaluation of Cr(VI) trends was performed using data for all wells in the WTR-MM-2a program with eight or more sample results between January 2011 and September 30, 2014 (historical data are provided in Appendix F) to identify domestic supply wells (if any) that might exhibit increasing chromium concentration trends. As summarized in Table 6-4, 60 wells in the WTR-MM-2a monitoring program had eight or more sample results available for statistical trend analysis. At the 95 percent confidence interval ($p = 0.05$), the non-parametric Mann-Kendall statistical trend analysis did not indicate increasing trends at any of these wells. Therefore, no potentially affected wells were identified.

Particle track modeling results for simulations of existing and proposed ATU operations were presented in the revised ROWD (ARCADIS, 2014a). In the case of WTR-MM-2a, the particles were assumed to represent Cr(VI) in the vicinity of the ATUs. The particle track modeling did not identify domestic wells as potentially affected within the next year (or in the next 10 years). Particle track results forecasted for 10 years of operation show that water applied at the active ATUs will be captured by the current set of northern extraction wells or will migrate insignificantly over the next 10 years. Therefore, the chromium plume is not expected to migrate towards domestic wells located to the east, west, or north due to remediation. Based on the modeling results, no potentially affected wells are identified.

6.2 Analysis of Whether Any Domestic and Agricultural Supply Wells Were Affected by Agricultural Byproducts due to Remediation (WTR-MM-2b)

6.2.1 Domestic and Agricultural Supply Well Byproducts Monitoring

As described in the MRP, initial monitoring of domestic and agricultural wells is required prior to operation of agricultural treatment units for a minimum of 1 year on a quarterly basis (or concurrently with commencement of operations of new ATUs if initial operations cannot be performed without delaying planned remediation efforts). Initial monitoring for agricultural byproducts in domestic and agricultural supply wells began during the Second Quarter of 2014. The initial monitoring area includes domestic and agricultural supply wells that are located within 1 mile downgradient or cross-gradient of any proposed ATU (see Figure 6-2). Appendix F, Table F-1, summarizes the mitigation measure WTR-MM-2b wells that were not sampled during the Third Quarter of 2014 for various reasons.

After the initial monitoring (minimum of four quarters) is complete, ongoing monitoring is required at domestic and agricultural supply wells on a semiannual basis during implementation of remedial activities. The ongoing monitoring area includes domestic and agricultural supply wells that are located within 0.5 mile downgradient and 0.25 mile cross-gradient of an ATU (see Figure 6-2).

6.2.2 Domestic and Agricultural Supply Well Byproduct Results and Analysis

EIR mitigation measure WTR-MM-2b requires determination of whether domestic and agricultural supply wells were affected by agricultural byproducts due to remediation. Details on the criteria evaluated are summarized in Table 6-1. Agricultural byproducts at the existing ATUs include uranium and other radionuclides (gross alpha and gross beta), TDS, and nitrate. ATU byproduct monitoring data for the reporting period are presented in Table 6-3. Historical ATU byproduct monitoring data for the domestic and agricultural supply wells is provided in Appendix F, Table F-3.

Figure 6-2 shows TDS and nitrate data for domestic and agricultural supply wells within the initial monitoring area for WTR-MM-2b. Figure 6-3 shows dissolved uranium, gross alpha, and gross beta data for domestic and agricultural supply wells within the initial monitoring area for WTR-MM-2b. A minimum of four quarters of data are needed to establish pre-remedial reference concentrations. Because initial monitoring to establish pre-remedial reference concentrations for ATU byproducts started during the Second Quarter of 2014, pre-remedial concentrations of ATU byproducts in domestic and agricultural wells are still being obtained. Therefore, no domestic or agricultural wells were identified during the Third Quarter of 2014 as being actually affected.

Potentially affected domestic and agricultural supply wells, in part, are wells within a 0.5 mile of an actually affected domestic or agricultural supply well. Because actually affected domestic or agricultural wells were not identified during the Third Quarter of 2014, no potentially affected domestic or agricultural supply wells were identified based on that criteria. Potentially affected domestic and agricultural supply wells can also be identified using computer modeling (as described directly below) or via identification of actually affected monitoring wells (see Section 6.2.3).

Particle track modeling results for simulations of existing and proposed ATU operations were presented in the revised ROWD (ARCADIS, 2014a). Particle tracking results for 10 years of current operation show that water applied at the ATUs will be captured by the current set of northern extraction wells or migrate insignificantly over a 10-year period (ARCADIS, 2014a). No potentially affected domestic wells were identified in the modeling of groundwater that may be impacted by byproducts increased by the ATUs (ARCADIS 2014a). Additional particle track modeling was performed at the request of the Water Board “to model and analyze known byproducts in groundwater, (including nitrate and TDS) while attempting to make a distinction between the byproducts that are increased by PG&E’s ATU operation and byproducts that existed prior to the operation of the ATUs.” This modeling was performed in the 0.5-mile pre-remedial

groundwater elevation sampling area specified in mitigation measure WTR-MM-2c and was reported in the revised ROWD Addendum #3 and Addition to Addendum #3 (ARCADIS, 2014b and c). Results of the additional modeling indicated that groundwater extraction associated with operation of ATUs and other remedies generally reduces the migration of existing nitrate and TDS in the vicinity of the existing and proposed ATUs. However, the modeling results suggest that there is one instance where water originating from nitrate or TDS plume boundaries may travel to active domestic wells that are located outside the depicted plume boundaries within particular aquifer units within 3 years:

- Active domestic well 25-14 is predicted to experience arrival of groundwater originating from the area with nitrate concentrations greater than 10 mg/L within 3 years with ATU pumping, slightly ahead of the predicted timing between 5 and 6 years predicted without ATU pumping. This well is not designated as potentially affected at this time, because it is not predicted to see arrival within the next year. The Third Quarter of 2014 nitrate as nitrogen result for this well was 3.4 mg/L (less than the MCL of 10 mg/L).

In summary, the byproducts generated by current and proposed ATU activities are not expected to migrate to any domestic or agricultural wells, although in one instance operation of ATUs may accelerate the movement of existing byproducts present in the aquifer toward a domestic or agricultural supply well. Therefore, based on modeling, no potentially affected domestic or agricultural supply wells are identified at this time.

Agricultural yields are not expected to decrease due to increases of TDS in agricultural supply wells resulting from remedial actions per the potentially affected well definition based on groundwater modeling for this mitigation measure (ARCADIS, 2014a).

6.2.3 Evaluation of Affected Monitoring Wells to Identify Potentially Affected Domestic and Agricultural Supply Wells

Only small quantities (if any) of extracted groundwater applied to the ATUs is expected to have percolated downward and into the aquifer since the ATU WDRs were initiated on March 12, 2014. Based on reviewing historical water level and chemistry data for the ATUs, it is estimated that it takes a year or longer for irrigation water to percolate the distance of 70 to 80 feet through the vadose zone and into the aquifer. Therefore, any changes observed in monitoring well chemistry at this time are unlikely to be related to PG&E's ATU operations and are more likely to reflect changes due to pre-existing aquifer conditions.

As required by the March 12, 2014, ATU WDRs, Appendix F of the MRP (Water Board, 2014a), monitoring well data were evaluated to determine whether there are monitoring wells potentially affected by ATU operations that could indicate potentially affected domestic or agricultural supply wells. Because this is only the second groundwater monitoring event under the new ATU WDRs, there are limited historical data from which to develop baseline reference levels of nitrate and TDS in monitoring wells to compare to quarterly monitoring results. Additionally, only two quarters of baseline data are available for dissolved uranium or other radionuclides in monitoring wells, so these constituents were not evaluated; uranium and other radionuclides will be evaluated as part of the mitigation measure WTR-MM-5 investigation.

The proposed methodology for establishing pre-remedial reference values to aid in identifying actually affected domestic and agricultural supply wells is currently being considered by the Water Board (PG&E, 2014a). In the Second Quarter of 2014 ATU Monitoring Report (CH2M HILL and ARCADIS, 2014b), the proposed methodology included using a baseline period from April 1, 2012, through March 31, 2014, for wells that have four quarters or more of data. On October 30, 2014, the Independent Review Panel (IRP) Manager provided comments on the proposed methodology to develop pre-remedial reference levels to the Water Board. The IRP Manager suggested that a review of any historical data (if available) be conducted in addition to the proposed April 1, 2012, through March 31, 2014, baseline period data and also that the historical data be incorporated into the baseline condition assessment (IRP Manager, 2014).

With respect to nitrate and TDS, the area outside of hydraulic capture zones (shallow and deep) shown on Figures 3-1 and 3-2 (dark blue dashed line) were reviewed to identify monitoring wells located

downgradient and cross-gradient from the ATUs. This criteria is intended to identify monitoring wells that could be affected by ATU operations, where groundwater is not being captured by the current groundwater extraction system. Six monitoring wells with at least four quarters of nitrate and TDS data from April 1, 2012, through March 31, 2014, were evaluated to estimate baseline conditions.⁵ As summarized in Table 6-5, nitrate and TDS concentrations at all six wells exceeded either the State of California MCL (10 mg/L) or State of California SMCL (500 mg/L), respectively, prior to the Second Quarter of 2014.

According to the March 12, 2014, ATU WDRs, Appendix F of the MRP, for wells previously exceeding the State of California MCL, a 10 percent increase in concentrations indicates an “affected monitoring well.” The Third Quarter of 2014 nitrate concentrations decreased from the proposed maximum concentration reported from April 1, 2012, through March 31, 2014, at all six wells. No potentially affected domestic or agricultural wells were identified based on the monitoring well nitrate data.

According to the March 12, 2014, ATU WDRs, Appendix F of the MRP, for wells previously exceeding the State of California SMCL for TDS, a 20 percent increase in concentrations indicates an “actually affected monitoring well.” The Third Quarter of 2014 TDS concentrations either decreased or did not exhibit increases exceeding 20 percent for five of the six monitoring wells (Table 6-5). At one of the six wells (MW-85S), the TDS concentration during the Third Quarter of 2014 (2,700 mg/L) increased 38 percent over the proposed maximum TDS concentration (1,960 mg/L) reported for April 1, 2012, through March 31, 2014. As shown on Figure 5-5, TDS concentrations exceeding 2,700 mg/L are currently (and have historically been) present at monitoring wells cross-gradient of MW-85S (for example, MW-89S, MW-127S1, MW-127S2, and MW-206S). The current and historical TDS concentrations at MW-85S are below or within the range of TDS concentrations (3,500 to 6,600 mg/L) reported for nearby monitoring wells. Elevated TDS concentrations in this area are already present from decades of historical farming and agricultural operations (see Section 5.1) and were present prior to PG&E ATU operations.

A review of historical data for MW-85S and a non-parametric statistical trend analysis of all available data using the Mann-Kendall test were also conducted to assess the statistical significance of the apparent increase in TDS concentration at MW-85S. The Third Quarter of 2014 TDS result did not exceed the maximum historical TDS concentration of 3,480 mg/L reported for this well in October 2010, which occurred prior to the start of the operation of the nearest ATU of Gorman-North (see Appendix E, Table E-1 for the historical analytical data for this well). As summarized in Exhibit 6-1 below, the Mann-Kendall statistical analysis for TDS concentrations at MW-85S indicates that concentrations at this well have no trend and are stable at the 95 percent confidence level through 18 monitoring events beginning in June 2010. Based on the analysis above, no potentially affected domestic or agricultural wells were identified based on the monitoring well TDS data.

EXHIBIT 6-1

Non Parametric (Mann-Kendall) Trend Analysis for TDS at MW-85S

Analyte	Detect	Total Samples	Min	Max	Mean	Median	Trend	Stability
TDS	18	18	1,760	3,480	2,178	1,970	No Trend	Stable

Potentially affected domestic and agricultural supply wells, in part, are wells within a 0.5 mile downgradient or 0.25 mile cross-gradient of an actually affected monitoring well. Because no actually affected monitoring

⁵ The methodology for evaluating TDS concentration increase over a baseline maximum TDS concentration reported during the previous eight quarters is currently a proposed methodology set forth in PG&E’s August 14, 2014 submittal, and is subject to public review opportunity pursuant to the Water Board’s October 9, 2014, publication.

wells were identified during the Third Quarter of 2014, no potentially affected domestic or agricultural supply wells were identified based on this criteria.

The methodology for establishing pre-remedial reference values to aid in identifying potentially or actually affected domestic and agricultural supply wells is currently being discussed with the Water Board (PG&E, 2014a). Affected monitoring wells under EIR mitigation measure WTR-MM2b (if any) will be identified upon Water Board approval of the methodology for domestic/agricultural supply wells. The methodology for identifying affected monitoring well is expected to be similar to the methodology used for domestic and/or agricultural supply wells. TDS data for monitoring and domestic wells in future quarters will be compared with pre-remedial reference values and available historical data to evaluate whether domestic or agricultural supply wells are potentially affected.

6.3 Analysis of Whether Any Domestic and Agricultural Supply Wells Were Affected by Drawdown as a Result of Remediation (WTR-MM-2c)

6.3.1 Domestic and Agricultural Supply Well Drawdown Monitoring

As described in the MRP, initial monitoring of domestic and agricultural wells is required prior to operation of ATUs for a minimum of 1 year on a quarterly basis or concurrently with commencement of operations of new ATUs if initial operations cannot be performed without delaying planned remediation efforts. PG&E attempted to begin initial monitoring activities for domestic and agricultural supply wells potentially affected by drawdown during the Second Quarter of 2014. The initial monitoring area includes domestic and agricultural supply wells that are located within 0.50 mile of any existing or proposed extraction well (see Figure 6-4). Appendix F, Table F-2 shows domestic wells within the WTR-MM-2a, -2b, and -2c areas that have been purchased by PG&E within the reporting period.

After the initial monitoring is complete, ongoing monitoring is required at domestic and agricultural supply well on a semiannual basis during implementation of remedial activities. The ongoing monitoring area includes domestic and agricultural supply wells that are located within 0.25 mile of any existing extraction well (see Figure 6-4).

As presented in *EIR Mitigation Monitoring Requirement for Collection and Use of Water Level Data from Private Supply Wells, Pacific Gas and Electric Company Hinkley Compressor Station, Hinkley, California*, PG&E has identified challenges with the methodology described in the EIR which requires the manual water level measurements are obtained from private domestic and agricultural wells (PG&E, 2014b; CH2M HILL and ARCADIS, 2014b).

In summary, the following challenges and potential impacts to property owners make implementation of the methods prescribed for water level monitoring extremely difficult:

1. Well documentation for area wells, including well depth and screening information, from the California Department of Water Resources (DWR) is incomplete and/or cannot be matched to 6 of the 20 wells. During the Second and Third Quarters of 2014, DWR well completion reports were reviewed for wells within the WTR-MM-2c area to evaluate whether potential matches could be made for these six remaining wells. No additional matches were made.
2. During the Second Quarter of 2014 visual surveys were conducted at the WTR-MM-2c wells, where owner access was allowed, to determine if it was possible to obtain manual water level measurements. To date, 19 of the 20 WTR-MM-2c wells have been surveyed via visual assessment and using historical knowledge. The information from the surveys indicates that major modifications would need to be made at each of these domestic and agricultural wells prior to being able to obtain water levels. These modifications will likely take the well out of service for several days, and accurate water level measurements still might not be obtained. Many wells are several decades old, and retrofitting could cause issues with normal private well operation. Disturbing aging well components (i.e., piping, well

casing, pumps) during well modifications could affect well operability and cause suspended sediments, which could result in discolored water and/or taste and odor issues.

3. Even if the private wells were modified to make water level measurements possible, the water level data collected from these active pumping wells would likely not be representative of regional groundwater levels unless the private wells were left off (unpumped) for a sufficient period of time to allow recovery of drawdown at each private well before a manual water level is collected. Shutting down private wells for approximately 48 hours prior to measuring the water level would require close coordination and potential disruption of the normal activities of these well owners. This 48-hour well shutdown would need to occur each time manual water levels were collected from private wells in order to obtain representative water levels.

6.3.2 Domestic and Agricultural Supply Well Drawdown Results and Analysis

For the reasons listed above, PG&E used groundwater level data from monitoring wells located near the private domestic and agricultural supply wells collected over the past year (April 1, 2013 through March 31, 2014) and during the Third Quarter of 2014 (July 1 through September 30, 2014) to evaluate domestic and agricultural supply wells potentially affected by drawdown as required by mitigation measure WTR-MM-2c. The location of the monitoring wells and the 20 privately owned active or inactive domestic and agricultural wells located within the mitigation measure WTR-MM-2c initial and ongoing monitoring areas are shown on Figure 6-4.

Estimates of aquifer drawdown causing loss of more than 25 percent of the wetted screen depth at the domestic and agricultural supply wells and a summary of the information provided in Table 6-6 include the following:

1. Monitoring wells with available water level data that are located nearest to the mitigation measure WTR-MM-2c supply wells were identified as surrogate monitoring locations to the domestic and agricultural wells. Where there were data for two monitoring well screen depths (shallow and deep zone of the Upper Aquifer), water level measurements for both screen depths were reviewed.
2. For each domestic and agricultural well, the lowest groundwater elevation measured at the deepest screened (deep zone of Upper Aquifer) nearby monitoring well from the past year (April 1, 2013, through March 31, 2014) was used to estimate pre-remediation groundwater elevations.
3. Groundwater elevation at each private supply well was estimated to be comparable with the nearby monitoring well groundwater elevation. As shown on Figures 3-1 and 3-2, this is a reasonable approximation because groundwater levels generally do not change significantly over the relatively short distances (generally less than 0.25 mile) that separate the private supply wells from the surrogate monitoring wells.
4. The well construction information for the privately owned wells (where available) and the pre-remediation reference level from the nearest monitoring well were used to estimate how much drawdown would need to occur before drawdown of more than 25 percent of the wetted screen depth would occur. This information was used to calculate a “trigger elevation” where groundwater elevations at the privately owned supply wells are estimated to lose 25 percent of their wetted screen depth.
5. No supply well construction information is available for three locations (02-02B, 23-25, and 23-28). Well construction information from nearby private supply or monitoring wells was used to estimate trigger levels at these locations. No screen information is available for private wells (02-23, 27-41, and 34-38), but total depth information is available. For these wells, it was assumed that they are screened to the total well depths shown in Table 6-6.
6. The estimated trigger levels (depth to water and elevation) that would cause a decrease of 25 percent or more in wetted screen interval for the 20 private supply wells (WTR-MM-2c) are summarized in Table 6-6 and shown on Figure 6-4. The Third Quarter of 2014 manual water level measurements were

compared with these “trigger levels” to assess if drawdown below the trigger levels has occurred. As shown on Figure 6-4 and listed in Table 6-6, the Third Quarter of 2014 manual water level measurements from monitoring wells do not indicate that drawdown below trigger levels has occurred; thus, no private domestic or agricultural supply wells were affected during the reporting period.

In addition, as described in the ROWD, water supply wells with available construction information were evaluated and were predicted not to be potentially affected by drawdown (ARCADIS, 2014a). Many wells are not predicted to be potentially affected, given the long well screens available that would require more than 20 feet of drawdown to trigger the criteria.

In the ROWD, the locations of existing private supply wells were also plotted on a map showing groundwater drawdown estimated by the groundwater flow model associated with the proposed remedy to assess wells that could potentially be affected by the remedy after 1, 2, and 3 years of operation (ARCADIS, 2014a). No domestic supply wells were predicted to experience at least 10 feet of drawdown during the first year of ATU operation. After 2 years of operation, two domestic supply wells—one active (23-27) and one inactive (23-25) (as of March 6, 2013 but active as of May 13, 2014)—fall within the model predicted area with between 10 and 20 feet of drawdown. After 3 years of operation, one additional active domestic supply well (34-38) falls within the model predicted area with between 10 and 20 feet of drawdown.

Drawdown of 10 feet at these locations will trigger monitoring for arsenic, manganese, uranium, and gross alpha. Because drawdown of at least 10 feet is predicted to occur within 2 or 3 years of operation, baseline monitoring for arsenic, manganese, uranium, and gross alpha is proposed, pending receipt of permission from the well owners, at the three domestic supply wells (23-27, 23-25, and 34-38) during the first year of operation.

SECTION 7

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Tables

TABLE 1-1

Chronology of Agricultural Treatment Unit Operations
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Period	Key Milestone
September 2004	Part-time operation of the DVD LTU began with extraction well EX-01.
March 2005	Full-time operation began with extraction wells EX-01 and EX-02.
May 2007	Phase 1 optimization of the system was implemented with the installation and start-up of extraction wells EX-03 and EX-04.
June 2008	Phase 2A optimization began with the addition of extraction wells EX-15, EX-16, and EX-20.
October 2009	Application of groundwater from EX-15, EX-16, and EX-20 wells to the DVD LTU was discontinued. These wells were integrated into the South Central Reinjection Area in situ remediation system.
July 2010	New extraction wells EX-23 and EX-24 were installed.
July 2010	Water Board issued revised Order allowing annual average groundwater application rate at the DVD LTU to increase to a maximum of 520 gpm.
July 2010	Adjustments were made to DVD LTU so that the average flow rates for August and September were 478 and 534 gpm, respectively.
August 2010	Electrical hookups and piping to new extraction wells EX-23 and EX-24 were installed.
September 2010	Groundwater extraction was initiated at EX-23 and EX-24. Water was routed to DVD LTU.
November 2010	Annual average discharge rate to DVD LTU exceeded former permitted maximum rate (345 gpm) as a result of increased application rates. Annual average discharge rate to DVD LTU has increased steadily since that time.
November-December 2010	Vegetation stress due to over watering was observed at the DVD LTU. In response, application rates were decreased, but remained at levels much higher than previous winter rates.
March 2011	Electrical and piping for EX-25 were installed. Groundwater extraction was initiated at well EX-25. New extraction wells EX-26 and EX-28 were installed. Full-time operation of agricultural supply wells G-1R, G-2R, and G-5R (on the Gorman ATU), located north and east of the DVD LTU, begin supplying groundwater to the new Gorman ATU.
April 2011	New extraction well EX-27 was installed. Additional drip lines were installed on the DVD LTU to increase flow capacity. Total acreage at the DVD LTU is increased to 73 acres.
May-June 2011	Electrical and piping were installed for new extraction wells EX-26, EX-27, EX-28, and existing extraction well EX-09. Four new agricultural supply wells (C-01, C-02, C-03, C-04) began pumping on the Cottrell ATU. Irrigation using existing extraction wells IW-01 and IW-02 was started on the Ranch ATU. IW-03 was operated briefly before determining that optimal extraction was achieved through operation of IW-01 and IW-02.
July 2011	Groundwater extraction was initiated at wells EX-09, EX-26, EX-27, and EX-28. Water was routed to DVD LTU.
September 2011	DVD LTU flow rates increased to achieve historical high monthly average application rate of approximately 675 gpm.
May 2012	Five new extraction wells EX-29, EX-30 (Ranch ATU) and EX-31, EX-32, EX-33 (Gorman ATU) began pumping. The startup of well EX-32 fulfills Requirement 3.6 of Amended CAO Number R6V-2008-0002A3 (Water Board, 2012).
August-October 2012	New extraction well EX-34 was constructed, and piping and electrical were connected. EX-25 was plumbed to allow the extracted flow to be switched between the DVD system and ATU system. Flow from EX-25 was first diverted to the ATUs from October 2, 2012 to October 8, 2012, and periodic diversions continue to present.

TABLE 1-1

Chronology of Agricultural Treatment Unit Operations
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Period	Key Milestone
November 2012	Groundwater extraction was initiated at well EX-34 and water was routed to the DVD LTU.
December 2012	Flow from EX- 29 and EX-30 was diverted to the SCRIA IRZ system starting December 6, 2012.
March 2013	Extraction well EX-35 began pumping to supply the Gorman and Cottrell ATUs.
April 2013	Operation of the Yang ATU began on April 3, 2013, to provide additional extraction capacity. Operation began with pumping from C-04 and application to approximately one third of the field.
October –December 2013	On October 17, 2013, start-up of the expanded Yang ATU irrigation system began, with flow supplied from the same water supply system used for the Gorman and Cottrell ATUs. Start-up and shakedown activities at the Yang ATU continued throughout Fourth Quarter 2013. Three new extraction wells (Y-01, Y-02, and Y-03) for Yang ATU were installed, and two (Y-01 and Y-03) were connected to the Yang ATU water supply system but were not yet in operation.
March 2014	Water Board adopted <i>Board Order No. R6V-2014, Waste Discharge Requirements for Pacific Gas and Electric Company Groundwater Remediation Project – Agricultural Treatment Units</i> on March 12. The DVD LTU system was initially permitted under Board Order No. R6V-2004-0034 and its amendments. All of the ATUs, including the former DVD LTU, are now operated under R6V-2014-0023, which rescinded R6V-2004-0034 and all of its amendments.
April 2014	Flow from EX- 29 and EX-30 was diverted from the SCRIA system to the Ranch ATU starting April 14, 2014. Periodic diversions of flow from EX-29 and EX-30 between the SCRIA system and Ranch ATU continue to present. Extraction wells Y-1 and Y-3 started operation.
September 2014	The Ranch ATU Expansion was completed and the expanded Ranch ATU started up on September 15. Ranch ATU acreage was increased to 61 acres. Construction for the Community East ATU began with installation of four extraction wells (SAU-EX-01, SAU-EX-02, SAU-EX-03, SAU-EX-04). Construction continued into the Fourth Quarter of 2014.

Notes:

ATU	=	Agricultural Treatment Unit
DVD LTU	=	Desert View Dairy Land Treatment Unit
gpm	=	gallons per minute
IRZ	=	In Situ Reactive Zone
SCRIA	=	South Central Re-Injection Area

TABLE 2-1

Facility Operations Maintenance Log**Third Quarter 2014 Agricultural Treatment Units Monitoring Report***Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Date	Operations
July 1	The Third Quarter of 2014 operations began utilizing extraction wells EX-01, EX-02, EX-3, EX-23, EX-24, EX-28, EX-34, EX-25, EX-26, EX-31, EX-32, EX-33, EX-35, G-5R, C-1, C-2, C-3, C-4, IW-1, IW-2 and IW-3. Yang was started. Cottrell was shut down. Ranch was started. Conducted leak repairs in DVD field S5.
July 2	Replaced flow totalizers at IW-02 and IW-03.
July 3	Cottrell was started. Gorman North was shut down. EX-26 was stopped.
July 7	Gorman North was started. Gorman South was shut down.
July 8	EX-26 was started; EX-23, EX-24, and EX-28 were shut down.
July 9	Gorman South was started. Completed LEPA installation on irrigation lines at Gorman South. Started LEPA installation on inner tower of Gorman North. The LEPA socks were installed to replace the drip emitters to improve efficiency and reduce pressure buildup due to clogged emitters. The LEPA socks also lower overall system pressures for the ATUs. Conducted leak repairs at DVD.
July 10	Gorman North was started. Yang pivot was shutdown. Y-1 was shut down.
July 11	Gorman North was shut down for harvest. Yang pivot was started.
July 14	Started EX-04, EX-23, and EX-24 for sampling.
July 15	Gorman North was started. Yang pivot was shut down. Y-1 was shut down.
July 16	Cottrell was shutdown. Yang pivot was started. Y-1 and Y-3 were started.
July 17	Cottrell was started. Gorman South was shut down for harvest. G-1R and G-2R were started for sampling. EX-04, EX-23, and EX-24 were shut down. Replaced VFD at EX-27.
July 18	EX-29 and EX-30 were diverted to SCRIA.
July 19	Ranch pivot was shut down for harvest. IW-1 and IW-2 were shut down. G-1R and G-2R were shut down after sampling.
July 23	Gorman South was started. Yang pivot was shut down. Y-1 and Y-3 were shut down.
July 24	Yang pivot was started. Y-1 and Y-3 were started. Cottrell was shut down.
July 25	Cottrell was started. Yang pivot was shutdown. Y-1 and Y-3 were shutdown.
July 28	Cottrell was shut down. Yang pivot was started. Y-1 and Y-3 were started.
July 30	Cottrell was started. Gorman South was shut down. Ranch pivot was started. IW-1 and IW-2 were started. EX-29 and EX-30 were routed to the Ranch pivot.
July 31	Gorman South was started. Cottrell was shutdown. PLC at EX-27 malfunctioned and was reset.
August 3	A sitewide power outage occurred mid-day, affecting the Central Area, Source Area, SCRIA, DVD and northern ATUs.
August 4	Diagnosed and restarted DVD SCADA computer following power outage. Restarted Central Area, Source Area, SCRIA, DVD and northern ATUs.
August 7	Cottrell was started. Gorman North was shut down. Conducted troubleshooting at EX-02 and performed repairs.
August 8	Gorman North was started. Gorman South was shut down. Raised Cottrell drip lines to prevent the valves and weights from damaging crops. Yang 1/2 field harvest.
August 11	Gorman South was started. Yang Pivot was shut down. Y-1 and Y-3 were shut down.
August 12	Cottrell was shut down. Yang Pivot was started. Restarted Gorman North after power surge. EX-29 and EX-30 were off due to power surge. Y-1 and Y-3 were started.
August 13	Cottrell was started. Gorman North was shut down. EX-29 and EX-30 were started. Conducted leak repairs in DVD field S4.
August 15	IW-1 and IW-2 were shut down. EX-29 and EX-30 were diverted to the SCRIA.

TABLE 2-1

Facility Operations Maintenance Log*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Date	Operations
August 19	Cottrell was shut down. Gorman North was started.
August 20	Cottrell was started. Gorman South was shut down.
August 25	Cottrell was shut down.
August 26	Gorman South was started. Yang Pivot was shut down. Y-1 and Y-3 were shut down. Started G-2R.
August 27	Cottrell was started.
August 28	Gorman North was started. EX-35 was started.
August 29	Cottrell was shut down. Yang Pivot was started. Y-3 was started.
September 3	G-2R was shut down.
September 5	Cottrell was started. Gorman South was shut down.
September 7	C-1 was shut down. EX-33 was shut down. EX-35 was shut down. Y-3 was shut down.
September 8	Started C-1. Gorman South was started. EX-33 was started. EX-35 was started. Y-1 was shut down. Yang Pivot was shut down.
September 11	Construction of Community East ATU began with drilling and construction of four extraction wells (SAU-EX-01 through SAU-EX-04). Well construction continued through the end of the Third Quarter.
September 15	Expanded Ranch pivot system was started up. IW-01 and IW-02 were started.
September 16	Y-1 was started. Yang Pivot was started. EX-29 and EX-30 were shut down. Performed leak repair at DVD backwash filter.
September 17	Gorman North was shut down. EX-29 and EX-30 were started. Conducted DVD system flushes. Identified leak in DVD field S5.
September 22	EX-29 and EX-30 were routed to the Ranch pivot. Prepared for chemical injections at DVD.
September 23	Citric acid injection was conducted at the DVD. Ten bags (50 pounds/bag) of citric acid were mixed with approximately 600 gallons of water, and the citric solution was injected into the drip irrigation tubing. Injection occurred over a period of approximately 12 hours.
September 24	Gorman North was started. Gorman South was shut down. Hydrogen peroxide injection was conducted at the DVD. Two drums (55 gallons) of hydrogen peroxide was injected into the drip irrigation tubing. DVD was offline overnight.
September 25	Flushed DVD piping network.
September 26	Y-3 was started. Completed riser repairs in DVD field S5.
September 30	EX-32 was shut down. Performed riser leak repairs in DVD field S6.

Notes:

DVD = Desert View Dairy

LEPA = low energy precise application

PLC = programmable logic controller

SCRIA IRZ = South Central Re-injection Area In Situ Reactive Zone

VFD = variable frequency drive

TABLE 2-2

Extraction Rates for ATU Supply Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Period	Extraction Well Average Rates (gpm)																													
	EX-1	EX-2	EX-3	EX-4	EX-9	EX-23	EX-24	EX-25	EX-26	EX-27	EX-28	EX-34	C-1	C-2	C-3	C-4	G-1R	G-2R	G-5R	Y-1 ^c	Y-3 ^c	EX-31	EX-32	EX-33	EX-35	IW-1	IW-2	IW-3	EX-29 ^d	EX-30 ^d
October 2013	102	38	42	6	1	19	4	71	101	18	10	46	87	16	12	102	3	2	94	-	-	6	1	13	104	189	176	22	0	0
November 2013	111	66	25	4	0	0	0	59	96	0	0	46	83	13	10	91	0	0	63	-	-	7	0	12	111	15	13	1	0	0
December 2013	83	75	12	0	0	0	0	106	107	0	0	50	67	14	10	58	0	0	78	-	-	8	0	13	99	97	83	24	0	0
January 2014	93	69	0	0	0	1	1	104	103	1	1	52	47	12	12	15	1	2	70	-	-	8	0.3	12	98	86	73	5	0	0
February 2014	113	56	1	0	0	0	0	99	100	0	0	50	72	17	13	86	0	0	72	-	-	9	0	12	101	49	45	0	0	0
March 2014	129	23	26	0	0	0	0	89	105	2	2	48	96	14	14	87	0	0	83	-	-	8	0	11	113	76	66	0	0	0
April 2014	69	0	24	0	0	1	0	51	77	1	1	45	116	16	13	102	2	1	99	1	2	9	0.9	10	125	129	19	1	11	11
May 2014	75	7	25	0	0	23	7	100	105	1	23	53	137	15	13	170	0	0	99	3	4	8	0	10	118	133	32	0	10	11
June 2014	95	109	41	0	0	1	0	108	109	3	0	42	119	15	10	133	0	0	92	2	0	6	6	10	113	95	139	70	13	13
July 2014	118	105	39	1	0	10	2	123	81	12	23	48	141	17	13	214	1	1	88	3	2	7	8	10	119	98	99	15	11	13
August 2014	133	87	48	0	0	0	0	100	65	29	28	46	142	14	11	206	0	9	89	3	3	8	7	10	97	82	79	0	8	11
September 2014	123	80	46	2	0	0	0	117	64	21	26	43	150	16	12	208	0	3	83	2	1	8	7	9	103	78	76	0	4	7
Third Quarter 2014	125	91	44	1	0	3	1	113	70	20	26	46	144	16	12	209	0	4	87	3	2	8	7	10	106	86	85	5	8	10
Annual (gpm), October 2013 through September 2014	104	60	27	1	0	5	1	94	93	7	10	47	105	15	12	123	1	2	84	2	2	8	2	11	108	94	75	11	5	6
Annual (mgd), October 2013 through September 2014	0.150	0.086	0.039	0.001	0.000	0.007	0.001	0.135	0.134	0.010	0.014	0.068	0.151	0.022	0.017	0.177	0.001	0.003	0.121	0.003	0.003	0.012	0.003	0.016	0.156	0.135	0.108	0.016	0.007	0.009

Notes:

a = Average monthly discharge rates for each ATU represent the monthly rate of groundwater discharge to land surface at that ATU. As of May 2012, the average monthly rate for the Gorman ATU is based on the discharge volume recorded at the Gorman North and Gorman South pivots. Cottrell ATU rates were calculated by the difference from May 2012 through August 2013. Beginning in September 2013, the discharge volume for the Cottrell pivot was measured directly and is no longer calculated. The average monthly rate for the Ranch ATU is based on the sum of the extraction well volumes located at the Ranch ATU. Discharge volume for the Yang pivot has been measured directly, and monthly rate is calculated based on this measurement. Discharge volume for the DVD has been calculated by adding the flows at the extraction wells (EX-1, EX-2, EX-3, EX-4, EX-9, EX-23, EX-24, EX-25, EX-26, EX-27, EX-28, and EX-34).

b = The Yang ATU was brought online on April 3, 2013 with extraction initially from well C-4. The balance of flow from well C-4 continued to supply the Gorman and Cottrell ATUs. As of October 17, 2013, the Yang ATU was disconnected from individual well C-4 and was connected to the distribution system supplying the Gorman and Cottrell pivots.

c = Y-01 was started on April 24, 2014, and Y-03 was started on April 3, 2014.

d = EX-29 and EX-30 were routed from the SCRIA extraction system to the Ranch pivot from June 27, 2014 to July 18, 2014. From July 18, 2014 to July 30, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. From July 30, 2014 to August 15, 2014, EX-29 and EX-30 were routed to the Ranch pivot. From August 15 to September 22, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. On September 22, 2014, EX-29 and EX-30 were routed to the Ranch pivot.

- ATU = Agricultural Treatment Unit
- DVD = Desert View Dairy
- gpm = gallons per minute
- mgd = millions of gallons per day
- SCRIA = South Central Reinjection Area

TABLE 2-2

Extraction Rates for ATU Supply Wells*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Period	ATU Discharge Rates (gpm) ^a					Total ATU Discharge Rate (gpm)
	DVD	Cottrell	Gorman	Ranch	Yang ^b	
October 2013	457	147	249	387	48	1,288
November 2013	407	21	246	29	125	828
December 2013	432	96	112	204	141	985
January 2014	426	40	173	164	58	861
February 2014	419	57	174	94	147	891
March 2014	425	74	165	142	186	992
April 2014	270	91	301	171	101	934
May 2014	337	180	237	187	237	1,177
June 2014	399	113	321	330	190	1,353
July 2014	438	212	341	236	192	1,418
August 2014	436	145	354	180	198	1,313
September 2014	405	202	360	166	155	1,288
Third Quarter 2014	426	186	351	194	182	1,339
Annual (gpm), October 2013 through September 2014	404	115	253	191	148	1,111
Annual (mgd), October 2013 through September 2014	0.582	0.166	0.364	0.275	0.213	1.600

Notes:

a = Average monthly discharge rates for each ATU represent the monthly rate of groundwater discharge to land surface at that ATU. As of May 2012, the average monthly rate for the Gorman ATU is based on the discharge volume recorded at the Gorman North and Gorman South pivots. Cottrell ATU rates were calculated by the difference from May 2012 through August 2013. Beginning in September 2013, the discharge volume for the Cottrell pivot was measured directly and is no longer calculated. The average monthly rate for the Ranch ATU is based on the sum of the extraction well volumes located at the Ranch ATU. Discharge volume for the Yang pivot has been measured directly and monthly rate is calculated based on this measurement. Discharge volume for the DVD has been calculated by adding the flows at the extraction wells (EX-1, EX-2, EX-3, EX-4, EX-9, EX-23, EX-24, EX-25, EX-26, EX-27, EX-28, and EX-34).

b = The Yang ATU was brought online on April 3, 2013 with extraction initially from well C-4. The balance of flow from well C-4 continued to supply the Gorman and Cottrell ATUs. As of October 17, 2013, the Yang ATU was disconnected from individual well C-4 and was connected to the distribution system supplying the Gorman and Cottrell pivots.

c = Y-01 was started on April 24, 2014, and Y-03 was started on April 3, 2014.

d = EX-29 and EX-30 were routed from the SCRIA extraction system to the Ranch pivot from June 27, 2014 to July 18, 2014. From July 18, 2014 to July 30, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. From July 30, 2014 to August 15, 2014, EX-29 and EX-30 were routed to the Ranch pivot. From August 15 to September 22, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. On September 22, 2014, EX-29 and EX-30 were routed to the Ranch pivot.

ATU = Agricultural Treatment Unit
 DVD = Desert View Dairy
 gpm = gallons per minute
 mgd = millions of gallons per day
 SCRIA = South Central Reinjection Area

TABLE 2-3
Volume of Groundwater Extracted from ATU Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Period	ATU Extraction Well Volumes (Total Volume, gallons)																		
	EX-1	EX-2	EX-3	EX-4	EX-9	EX-23	EX-24	EX-25	EX-26	EX-27	EX-28	EX-34	C-1	C-2	C-3	C-4	G-1R	G-2R	G-5R
October 2013	4,418,504	1,662,536	1,709,282	310,767	42,931	826,024	168,190	3,318,993	4,603,746	790,943	431,886	2,160,055	3,862,816	719,382	550,850	4,538,634	125,270	79,365	4,177,750
November 2013	4,681,720	2,738,094	1,017,664	155,347	0	0	0	2,789,300	4,187,960	100	0	2,132,060	3,586,540	588,708	422,998	3,945,360	0	0	2,724,146
December 2013	3,635,730	3,185,236	498,182	0	0	0	0	4,710,700	4,714,340	0	0	2,361,740	2,988,760	643,562	453,362	2,570,940	0	2,100	3,502,531
January 2014	4,138,160	3,076,670	739	13,066	16,700	56,600	22,610	4,660,200	4,595,500	51,500	41,030	2,337,300	2,106,300	538,650	540,190	676,500	53,670	99,800	3,145,966
February 2014	4,557,580	2,269,610	58,398	0	0	600	260	3,993,100	4,027,200	0	0	2,005,900	2,911,600	665,790	530,360	3,457,400	0	0	2,893,032
March 2014	5,769,070	1,046,450	1,162,074	0	0	0	0	3,953,600	4,696,800	111,500	99,000	2,140,500	4,300,500	632,620	610,510	3,905,800	0	0	3,694,177
April 2014	2,991,060	0	1,030,091	14,870	0	45,600	12,420	2,198,200	3,327,900	47,400	46,720	1,950,500	4,992,900	690,920	546,660	4,394,100	65,285	41,700	4,260,556
May 2014	3,345,360	305,880	1,111,281	0	0	1,040,100	328,580	4,483,200	4,706,000	24,700	1,041,700	2,379,800	6,107,100	664,720	597,310	7,591,800	0	0	4,412,695
June 2014	4,082,410	4,708,100	1,782,144	0	0	35,000	13,780	4,668,700	4,695,500	111,100	0	1,798,500	5,144,400	656,530	434,160	5,737,600	0	0	3,995,958
July 2014	5,278,710	4,685,140	1,718,640	30,406	0	444,300	91,780	5,494,900	3,602,100	527,500	1,029,350	2,158,400	6,315,100	740,430	566,180	9,543,600	62,076	38,900	3,932,159
August 2014	5,941,130	3,886,640	2,146,437	0	0	2,300	620	4,462,600	2,910,800	1,283,100	1,232,750	2,040,500	6,337,300	646,290	488,360	9,185,300	0	418,800	3,978,714
September 2014	5,294,660	3,475,630	1,989,319	0	0	16,700	0	5,067,600	2,750,300	902,200	1,138,620	1,851,100	6,470,400	692,060	510,820	8,989,200	0	137,900	3,601,575
Third Quarter 2014 (gallons)	16,514,500	12,047,410	5,854,396	30,406	0	463,300	92,400	15,025,100	9,263,200	2,712,800	3,400,720	6,050,000	19,122,800	2,078,780	1,565,360	27,718,100	62,076	595,600	11,512,448
(acre-feet)	51	37	18	0	0	1	0	46	28	8	10	19	59	6	5	85	0	2	35
Annual, October 2013 through September 2014 (gallons)	54,134,094	31,039,986	14,224,251	524,456	59,631	2,467,224	638,240	49,801,093	48,818,146	3,850,043	5,061,056	25,316,355	55,123,716	7,849,662	6,251,760	64,536,234	306,301	818,565	44,319,259
(acre-feet)	166	95	44	2	0	8	2	153	150	12	16	78	169	24	19	198	1	3	136
Cumulative Since Startup (gallons)	839,533,932	397,921,896	120,197,077	12,392,439	2,958,579	34,317,220	7,407,416	155,534,773	138,140,224	26,438,716	19,560,006	47,528,691	167,948,699	19,298,715	22,747,405	169,637,847	23,141,893	126,031,578	179,457,329
(acre-feet)	2,576	1,221	369	38	9	105	23	477	424	81	60	146	515	59	70	521	71	387	551

Notes:
a = Y-01 was started on April 24, 2014, and Y-03 was started on April 3, 2014.
b = EX-29 and EX-30 were routed from the SCRIA extraction system to the Ranch pivot from June 27, 2014 to July 18, 2014. From July 18, 2014 to July 30, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. From July 30, 2014 to August 15, 2014, EX-29 and EX-30 were routed to the Ranch pivot. From August 15 to September 22, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. On September 22, 2014, EX-29 and EX-30 were routed to the Ranch pivot.

ATU = Agricultural Treatment Unit
DVD = Desert View Dairy
SCRIA = South Central Reinjection Area

TABLE 2-3

Volume of Groundwater Extracted from ATU Supply Wells*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Period											
	EX-31	EX-32	EX-33	EX-35	Y-1 ^a	Y-3 ^a	IW-1	IW-2	IW-3	EX-29 ^b	EX-30 ^b
October 2013	275,270	58,675	570,273	4,622,042	-	-	8,429,200	7,842,600	988,300	0	0
November 2013	288,012	0	538,628	4,788,520	-	-	631,997	562,790	35,856	0	0
December 2013	368,188	0	566,622	4,397,980	-	-	4,339,803	3,721,710	1,057,144	0	0
January 2014	365,630	15,220	516,360	4,365,090	-	-	3,836,727	3,256,440	217,600	0	0
February 2014	374,060	0	470,470	4,055,600	-	-	1,991,290	1,797,160	0	0	0
March 2014	341,120	0	474,560	5,033,900	-	-	3,374,932	2,966,700	0	0	0
April 2014	395,810	38,190	441,620	5,415,500	20,895	89,727	5,574,643	836,480	22,700	465,629	480,607
May 2014	362,070	0	438,650	5,274,600	127,397	185,083	5,957,067	1,442,824	0	431,583	511,325
June 2014	270,110	270,740	412,610	4,888,000	87,599	11,010	4,091,311	6,023,596	3,017,700	546,960	579,939
July 2014	314,290	340,640	433,590	5,311,000	116,987	89,521	4,373,490	4,436,220	648,740	502,464	570,365
August 2014	362,190	300,380	433,410	4,340,300	123,106	145,393	3,649,180	3,538,390	0	345,608	491,731
September 2014	360,460	291,620	396,870	4,437,700	93,361	60,552	3,388,130	3,299,580	10	180,290	301,821
Third Quarter 2014 (gallons)	1,036,940	932,640	1,263,870	14,089,000	333,454	295,466	11,410,800	11,274,190	648,750	1,028,362	1,363,917
(acre-feet)	3	3	4	43	1	1	35	35	2	3	4
Annual, October 2013 through September 2014 (gallons)	4,077,210	1,315,465	5,693,663	56,930,232	569,346	581,286	49,637,770	39,724,490	5,988,050	2,472,534	2,935,788
(acre-feet)	13	4	17	175	2	2	152	122	18	8	9
Cumulative Since Startup (gallons)	8,705,619	5,791,918	11,302,684	92,178,785	569,346	581,286	157,549,970	127,892,589	10,657,450	6,800,744	7,014,273
(acre-feet)	27	18	35	283	2	2	483	392	33	21	22

Notes:**Notes:**

a = Y-01 was started on April 3, 2014, and Y-03 was started on April 3, 2014.

b = EX-29 and EX-30 were routed from the SCRIA extraction system to the Ranch pivot from June 27, 2014 to July 18, 2014. From July 18, 2014 to July 30, 2014, EX-29 and EX-30 were routed to the SCRIA extraction system. From July 30, 2014 to August 15, 2014, EX-29 and EX-30 were routed to the Ranch pivot. From August 15 to the SCRIA extraction system. On September 22, 2014, EX-29 and EX-30 were routed to the Ranch pivot.

ATU = Agricultural Treatment Unit
 DVD = Desert View Dairy
 SCRIA = South Central Reinjection Area

TABLE 2-4
Volume of Groundwater Discharged to ATUs
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Period	ATU Discharge Volumes (gallons) ^a					Total ATU Discharge (gallons)
	DVD	Cottrell	Gorman	Ranch	Yang ^b	
October 2013	20,443,857	6,544,460	11,126,164	17,260,100	2,132,939	57,507,520
November 2013	17,702,245	923,692	10,617,468	1,230,643	5,406,571	35,880,619
December 2013	19,105,928	4,270,888	4,999,044	9,118,657	6,295,378	43,789,895
January 2014	19,010,075	1,763,896	7,716,356	7,310,767	2,597,474	38,398,568
February 2014	16,912,648	2,297,353	7,010,902	3,788,450	5,943,420	35,952,773
March 2014	18,978,994	3,284,519	7,363,646	6,341,632	8,301,902	44,270,693
April 2014	11,664,761	3,927,216	12,992,119	7,380,059	4,375,484	40,339,639
May 2014	15,027,301	8,028,864	10,568,674	8,342,799	10,564,054	52,531,692
June 2014	17,226,534	4,871,360	13,881,927	14,259,506	8,211,206	58,450,533
July 2014	19,566,326	9,444,232	15,202,624	10,531,279	8,592,240	63,336,701
August 2014	19,444,277	6,493,896	15,797,917	8,024,909	8,848,092	58,609,091
September 2014	17,418,529	8,739,446	15,551,908	7,169,831	6,687,122	55,566,836
Third Quarter 2014 (gallons)	56,429,132	24,677,574	46,552,449	25,726,019	24,127,454	177,512,628
(acre-feet)	173	76	143	79	74	545
Annual, October 2013 through September 2014 (gallons)	212,501,475	60,589,822	132,828,749	100,758,632	77,955,882	584,634,560
(acre-feet)	652	186	408	309	239	1,794
Cumulative Since Startup (gallons)	1,817,585,261	278,709,089	498,816,298	309,915,026	96,257,683	3,001,283,356
(acre-feet)	5,578	855	1,531	951	295	9,211

Notes:

a = Average monthly discharge volumes for each ATU represent the monthly volume of groundwater discharge to land surface at that ATU. As of May 2012, the average monthly volume for the Gorman ATU is based on the discharge volume recorded at the Gorman North and Gorman South pivots. Cottrell ATU rates were calculated by the difference from May 2012 through August 2013. Beginning in September 2013, the discharge volume for the Cottrell pivot was measured directly and is no longer calculated. The monthly volume for the Ranch ATU is based on the sum of the extraction well volumes located at the Ranch ATU. Discharge volume for the Yang pivot has been measured directly. Discharge volume for the DVD has been calculated by adding the volume at the extraction wells (EX-1, EX-2, EX-3, EX-4, EX-9, EX-23, EX-24, EX-25, EX-26, EX-27, EX-28, and EX-34).

b = The Yang ATU was brought online on April 3, 2013 with extraction initially from well C-4. The balance of flow from well C-4 continued to supply the Gorman and Cottrell ATUs. As of October 17, 2013, the Yang ATU was disconnected from individual well C-4 and was connected to the distribution system supplying the Gorman and Cottrell pivots.

ATU = Agricultural Treatment Unit
 DVD = Desert View Dairy
 SCRIA = South Central Reinjection Area

TABLE 2-5

Changes in Extraction Rates from Previous Quarter and Previous Season*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Reporting Period	ATU Discharge Flowrates (gpm)					
	DVD	Cottrell	Gorman	Ranch	Yang	TOTAL
Current Reporting Period						
Third Quarter 2014	426	186	351	194	182	1,339
Comparison to Previous Reporting Period						
Second Quarter 2014	335	128	286	229	176	1,154
% Change	27%	45%	23%	-15%	3%	16%
Comparison to Current Reporting Period in Previous Year						
Third Quarter 2013	522	156	307	296	40	1,321
% Change	-18%	19%	14%	-34%	355%	1%

Notes:

ATU = Agricultural Unit

DVD = Desert View Dairy

gpm = gallons per minute

TABLE 2-6

Well Rehabilitation Reagents and Volume**Third Quarter 2014 Agricultural Treatment Units Monitoring Report**

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well	Operating Period	Duration of Chemical Rehabilitation ^a	NuWell 120	NuWell 310
			Total Monthly Volume (gallons)	Total Monthly Volume (gallons)
EX-2	April-2014	-	0	0
	May-2014	5/20/14 - 5/28/14	48	25
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-4	April-2014	4/4/14 - 4/9/14	3	1
	May-2014	-	0	0
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-5	April-2014	4/4/14 - 4/9/14	3	1
	May-2014	-	0	0
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-8	Jan-2014	-	0	0
	Feb-2014	-	0	0
	Mar-2014	3/28/14 - 4/14/14	8	4
	April-2014	-	0	0
	May-2014	-	0	0
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-9	April-2014	4/4/14 - 4/15/14	3	1
	May-2014	-	0	0
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-12	Jan-2014	-	0	0
	Feb-2014	-	0	0
	Mar-2014	3/27/14 - 4/10/14	5	3
	April-2014	-	0	0
	May-2014	-	0	0
	June-2014	-	0	0
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
X-13	April-2014	-	0	0
	May-2014	-	0	0
	June-2014	6/27/14 - 7/1/14	3	2
	July-2014	-	0	0
	August-2014	-	0	0
	September-2014	-	0	0
Third Quarter 2014			0	0
Total Volume to Date			72	37

Notes:

Volumes listed are pure chemicals.

a = Day chemicals were added and day water in the well was pumped.

TABLE 4-1

Laboratory Analytical Methods and Reporting Limits
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Matrix	Methods and Reporting Limits, By Analyte											
	Cr(VI)	Dissolved Cr(T)	--	Dissolved Iron ^a	Dissolved Manganese ^a	TOC	Dissolved Arsenic ^a	Dissolved Uranium ^a	Nitrate As Nitrogen	TDS	Gross Alpha	Gross Beta
Analytical Method	USEPA 218.6	USEPA 6020		USEPA 6010B	USEPA 6020	SM 5310 C	USEPA 6020	USEPA 200.8	USEPA 300.0	SM 2540 C	USEPA 900.0 ^b	USEPA 900.0 ^b
Reporting Limit	0.2 µg/L or 0.06 µg/L ^c	1.0 µg/L		20 µg/L	0.5 µg/L	1 mg/L	0.1 µg/L	1 µg/L	0.5 mg/L	10 mg/L	Varies - Requested 3 pCi/L	Varies - Requested 4 pCi/L
Soil	Cr(VI)	Cr(T)	Cr(III) (insoluble salts)	Arsenic	Manganese	--	--	Uranium (soluble salts)	--	--	--	--
Extraction Method	USEPA 3050	USEPA 3050		USEPA 3050	USEPA 3050			STLC/DI Water				
Analytical Method	USEPA 7199	USEPA 6020	--	USEPA 6020	USEPA 6020			USEPA 200.8				
Reporting Limit	~0.4 mg/kg	~1 mg/kg	By difference: Cr(T) - Cr(VI)	~1 mg/kg	~1 mg/kg			~0.02 mg/kg				
Plant Tissue	Cr(VI)	Cr(T)	Cr(III) (insoluble salts)	--	--	--	Arsenic	Uranium	--	--	--	--
Extraction Method	Deionized water extraction	Modified USEPA 3005A	--				Modified USEPA 3005A	Modified USEPA 3005A				
Analytical Method	USEPA 7199	USEPA 6020	By difference: Cr(T) - Cr(VI)				USEPA 6020	USEPA 200.8				
Reporting Limit	~0.5 mg/kg	~1.0 mg/kg	~1 mg/kg				Estimated ~1.0 mg/kg	Estimated ~1.0 mg/kg				

Notes:

a - Groundwater samples for dissolved metals will be filtered in the field.

b - The analytical method used to obtain gross alpha and gross beta results will be dependent on the TDS of the samples.

c - The reporting limit for Cr(VI) will be dependent on the use of the data. For example, Cr(VI) data collected within OU1 are generally anticipated to be reported at 0.2 µg/L, while Cr(VI) results from other locations may be reported at 0.06 µg/L.

µg/L - micrograms per liter

Cr(III) - trivalent chromium

Cr(T) total chromium

Cr(VI) - hexavalent chromium

mg/L - milligrams per liter

mg/kg - milligrams per kilogram

OU1 - Operable Unit 1

pCi/L - picoCuries per liter

SM - Standard Method

STLC/DI- Soluble Threshold Limit Concentration/De-Ionized

TDS - total dissolved solids

USEPA - U.S. Environmental Protection Agency

Table 4-2

Analytical Results for Soil Samples*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

ATU	Sample ID	Sample Depth (ft BGS)	Sample Date	Hexavalent Chromium (mg/kg)	Chromium (mg/kg)	Chromium, Trivalent (mg/kg) ^a	Uranium (mg/kg)
Cottrell (OU2)							
C-SOIL-1	C-SOIL-1-U-059-Q3	0 - 0.5	7/17/2014	ND (0.21)	5.9	5.8	0.83
	C-SOIL-1-D-059-Q3	5 - 5.5	7/17/2014	ND (0.21)	4.1	4.0	
C-SOIL-2	C-SOIL-2-U-059-Q3	0 - 0.5	7/17/2014	ND (0.21)	6.8	6.7	1.3
	C-SOIL-2-D-059-Q3	5 - 5.5	7/17/2014	ND (0.2)	4	3.9	
Desert View Dairy (OU2)							
D-SOIL-1	D-SOIL-1-U-059-Q3	0 - 0.5	7/18/2014	ND (0.21)	5.6	5.5	1.2
	D-SOIL-1-D-059-Q3	5 - 5.5	7/18/2014	ND (0.2)	9.9	9.8	
D-SOIL-2	D-SOIL-2-U-059-Q3	0 - 0.5	7/17/2014	ND (0.21)	11	10.9	2
	D-SOIL-2-D-059-Q3	5 - 5.5	7/17/2014	ND (0.21)	3	2.9	
D-SOIL-3	D-SOIL-3-U-059-Q3	0 - 0.5	7/17/2014	ND (0.21)	8.3	8.2	1.5
	D-SOIL-3-D-059-Q3	5 - 5.5	7/17/2014	ND (0.21)	4.3	4.2	
D-SOIL-4	D-SOIL-4-U-059-Q3	0 - 0.5	7/17/2014	ND (0.21)	7.3	7.2	1
	D-SOIL-4-D-059-Q3	5 - 5.5	7/17/2014	ND (0.21)	4.8	4.7	
Gorman (OU2)							
G-SOIL-1	G-SOIL-1-U-059-Q3	0 - 0.5	7/16/2014	ND (0.22)	5.9	5.8	1.2
	G-SOIL-1-D-059-Q3	5 - 5.5	7/16/2014	ND (0.21)	2.6	2.5	
G-SOIL-2	G-SOIL-2-U-059-Q3	0 - 0.5	7/16/2014	ND (0.21)	7.1	7.0	0.73
	G-SOIL-2-D-059-Q3	5 - 5.5	7/16/2014	ND (0.2)	6	5.9	
G-SOIL-3	G-SOIL-3-U-059-Q3	0 - 0.5	7/17/2014	ND (0.22)	6.8	6.7	1.2
	G-SOIL-3-D-059-Q3	5 - 5.5	7/17/2014	ND (0.2)	4.4	4.3	
Ranch (OU2)^b							
R-SOIL-1	R-SOIL-1-U-059-Q3	0 - 0.5	7/18/2014	ND (0.21)	11J	10.9	0.84
	R-SOIL-1-D-059-Q3	5 - 5.5	7/18/2014	ND (0.22)	8.1	8.0	
R-SOIL-2	R-SOIL-2-U-059-Q3	0 - 0.5	7/18/2014	ND (0.21)	9.1	9.0	0.89
	R-SOIL-2-D-059-Q3	5 - 5.5	7/18/2014	ND (0.21)	8.1	8.0	
Yang (OU2)							
Y-SOIL-1	Y-SOIL-1-U-059-Q3	0 - 0.5	7/17/2014	ND (0.22)	8.3	8.2	0.89
	Y-SOIL-1-D-059-Q3	5 - 5.5	7/17/2014	ND (0.2)	2.7	2.6	
Y-SOIL-2	Y-SOIL-2-U-059-Q3	0 - 0.5	7/17/2014	ND (0.22)	7.7	7.6	1
	Y-SOIL-2-D-059-Q3	5 - 5.5	7/17/2014	ND (0.21)	3.2	3.1	

Table 4-2

Analytical Results for Soil Samples

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Notes:

- ^a The Monitoring and Reporting Program specifies that Cr(III) (insoluble salts) should be sampled, but standard commercial analyses for Cr(III) for soil are unavailable. Cr(III) is calculated as the difference between Cr(T) and Cr(VI). For this calculation, half the reporting limit is used for non detects.
- ^b The Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2. Therefore, the Ranch ATU is considered to be in OU2.

ATU = Agricultural Treatment Unit

BGS = below ground surface

Cr(T) = Chromium

Cr(III) = Trivalent Chromium

CR(VI) = Hexavalent Chromium

ft = feet

mg/kg = milligrams per kilogram

NA = not applicable

ND (x.x) = parameter is not detected at or above the reporting limit shown

OU = operable unit

Table 5-1

Analytical Results for Agricultural Treatment Units Irrigation Water, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Cottrell Pivot (CPVT)	10/09/13		6.3	6.3	12.7	1,200	---	---	---
	01/08/14		5.6	5.5	10.9	1,240	---	---	---
	01/08/14	FD	5.5	5.6	10.7	1,240	---	---	---
	04/10/14		7.3	7.0	13.0	1,300	95.6	16.8J	34.0
	04/10/14		---	---	---	---	56.1S	---	---
	07/16/14		7.2	6.3	13.0	1,200	41.0J	4.84	35.0
Booster Station - DVD (DVD-BS-01)	10/09/13		12.4	11.2	16.5	2,130	---	---	---
	01/08/14		10.1	10.8	20.3	2,060	---	---	---
	04/10/14		10.0	11.0	20.0	2,700	118	17.0J	72.0
	04/10/14		---	---	---	---	38.4JS	---	---
	04/10/14	FD	10.0	10.0	20.0	2,700	116	21.2J	74.0
	04/10/14	FD	---	---	---	---	45.6JS	---	---
	07/16/14		16.0	14.0	15.0	2,000	71.1	11.3	60.0
Gorman - North Pivot (GPVTN)	10/09/13		2.4	2.4	16.8	2,910	---	---	---
	01/08/14		4.3	4.8	11.6	1,610	---	---	---
	04/08/14		4.3	3.8	16.0	2,600	35.8J	10.7	39.0
	04/08/14		---	---	---	---	25.4JS	---	---
	04/08/14	FD	4.3	4.0	15.0	2,500	49.9J	10.2	38.0
	04/08/14	FD	---	---	---	---	27.6JS	---	---
	07/18/14		2.9	2.7	17.0	2,800	35.6J	8.67	36.0
Gorman - South Pivot (GPVTS)	10/09/13		4.5	4.1	9.37	1,360	---	---	---
	01/08/14		2.2	2.6	21.8	3,140	---	---	---
	04/08/14		6.2	5.6	11.0	1,300	51.3	8.89	33.0
	07/18/14		ND (0.06)	ND (1.0)	16.0	2,000	55.7J	12.0	43.0
Ranch Pivot (RPVT)	10/09/13		23.8	22.6	13.7	1,170	---	---	---
	01/08/14		16.6	16.4	14.6	1,180	---	---	---
	04/18/14		26.0	26.0	11.0	1,200	52.0	7.11	36.0
	04/18/14		---	---	---	---	26.3S	---	---
	07/17/14		23.0	24.0	12.0	1,200	40.5J	6.31	31.0

Table 5-1

Analytical Results for Agricultural Treatment Units Irrigation Water, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Yang (YAU)	01/08/14		5.2	5.1	11.5	968	---	---	---
	04/23/14		9.7	9.0	9.30	990	44.5J	8.13	32.0
	07/17/14		7.1	7.9	13.0	1,200	40.2J	8.12	29.0

Notes:

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

-- = not analyzed

µg/L = micrograms per liter

ATU = Agricultural Treatment Unit

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

mg/L = milligrams per liter

ND (x.x) = not detected at or above the reporting limit shown

pCi/L = picocuries per liter

S = Screening

TABLE 5-2

Groundwater Monitoring Program for Existing Agricultural Treatment Units
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location ID			Monitoring Program		Analytes and Sampling Frequency				
					Byproducts in Groundwater Investigation (WTR-MM-5) (1 Year ^a)		Frequency Per MRP		
					Domestic Well Protection	Agricultural Byproducts, Chromium Effectiveness and Mitigation Measure WTR-MM-5 (for 1 Year)	TDS	Dissolved Uranium Gross Alpha Gross Beta	Cr(VI) Dissolved Cr(T) Nitrate as N TDS
Top of Well Screen (ft bgs)	Bottom of Well Screen (ft bgs)								
Monitoring Program As Specified in MRP									
<i>DVD</i>									
DW-02	80	110	X	X	Q	Q	Q	-- ^b	Q
MW-28A	82.9	92.9	--	X	Q	Q	SA	-- ^b	Q
MW-28B	96.8	106.8	--	X	Q	Q	SA	-- ^b	Q
MW-29	90.4	100.4	--	X	Q	Q	SA	-- ^b	Q
MW-31	117.6	127.6	--	X	Q	Q	Q	-- ^b	Q
MW-42B1	107.8	117.8	--	X	Q	Q	SA	-- ^b	Q
MW-42B2	119.4	129.4	--	X	Q	Q	SA	-- ^b	Q
MW-63	80	90	X	X	Q	Q	Q	-- ^b	Q
MW-71S	80	100	--	X	Q	Q	Q	-- ^b	Q
MW-71D	159	179	--	X	Q	Q	Q	-- ^b	Q
MW-83S	87	97	--	X	Q	Q	Q	-- ^b	Q
MW-83D	105	120	--	X	Q	Q	Q	-- ^b	Q
MW-89S	95	115	--	X	Q	Q	Q	-- ^b	Q
MW-89D	150	160	--	X	Q	Q	Q	-- ^b	Q
MW-127S1	80	95	X	X	Q	Q	Q	-- ^b	Q
MW-127S2	112	122	X	X	Q	Q	Q	-- ^b	Q
MW-170S	78	93	X	X	Q	Q	Q	-- ^b	Q
North and South Gorman									
MW-70S	100	115	--	X	Q	Q	Q	-- ^b	Q
MW-70D	150	165	--	X	Q	Q	Q	-- ^b	Q
MW-84S	108	128	X	X	Q	Q	Q	-- ^b	Q

TABLE 5-2

Groundwater Monitoring Program for Existing Agricultural Treatment Units
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

			Monitoring Program		Analytes and Sampling Frequency					
					Byproducts in Groundwater Investigation (WTR-MM-5) (1 Year ^a)		Frequency Per MRP			
					Domestic Well Protection	Agricultural Byproducts, Chromium Effectiveness and Mitigation Measure WTR-MM-5 (for 1 Year)	TDS	Dissolved Uranium Gross Alpha Gross Beta	Cr(VI) Dissolved Cr(T) Nitrate as N TDS	Dissolved Uranium Gross Alpha Gross Beta
Location ID	Top of Well Screen (ft bgs)	Bottom of Well Screen (ft bgs)								
MW-84D	150	165	X	X	Q	Q	Q	-- ^b	Q	
MW-206S	-	-	--	X	Q	Q	Q	-- ^b	Q	
MW-85S	100	120	X	X	Q	Q	Q	-- ^b	Q	
MW-85D	150	165	X	X	Q	Q	Q	-- ^b	Q	
MW-86S	80	95	--	X	Q	Q	SA	-- ^b	Q	
MW-86D	136	156	--	X	Q	Q	SA	-- ^b	Q	
MW-105S	80	95	X	X	Q	Q	Q	-- ^b	Q	
MW-105D	120	130	X	X	Q	Q	Q	-- ^b	Q	
Cottrell										
MW-55A	155.02	165.02	--	X	Q	Q	Q	-- ^b	Q	
MW-55S	90	105	--	X	Q	Q	Q	-- ^b	Q	
MW-68S	91	111	--	X	Q	Q	Q	-- ^b	Q	
MW-68D	136	156	--	X	Q	Q	Q	-- ^b	Q	
Yang										
MW-21A	99.5	109.5	--	X	Q	Q	Q	-- ^b	Q	
MW-21B1	119.3	129.3	--	X	Q	Q	Q	-- ^b	Q	
MW-32B1	131.1	141.1	--	X	Q	Q	Q	-- ^b	Q	
MW-32S	80	95	--	X	Q	Q	Q	-- ^b	Q	
MW-49A ^c	115.5	125.5	--	X	Q	Q	SA	-- ^b	Q	
MW-49B ^c	135.4	145.4	--	X	Q	Q	SA	-- ^b	Q	
MW-88S	75	90	--	X	Q	Q	SA	-- ^b	Q	
MW-88D	145	160	--	X	Q	Q	SA	-- ^b	Q	

TABLE 5-2

Groundwater Monitoring Program for Existing Agricultural Treatment Units
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

			Monitoring Program		Analytes and Sampling Frequency					
					Byproducts in Groundwater Investigation (WTR-MM-5) (1 Year ^a)		Frequency Per MRP			
					Domestic Well Protection	Agricultural Byproducts, Chromium Effectiveness and Mitigation Measure WTR-MM-5 (for 1 Year)	TDS	Dissolved Uranium Gross Alpha Gross Beta	Cr(VI) Dissolved Cr(T) Nitrate as N TDS	Dissolved Uranium Gross Alpha Gross Beta
Location ID	Top of Well Screen (ft bgs)	Bottom of Well Screen (ft bgs)								
Ranch										
MW-14B	132	142	--	X	Q	Q	SA	-- ^b	Q	
MW-14S	82	97	--	X	Q	Q	SA	-- ^b	Q	
MW-22A1	69	89	--	X	Q	Q	SA	-- ^b	Q	
MW-22B	115	125	--	X	Q	Q	SA	-- ^b	Q	
MW-27A	104	114	--	X	Q	Q	SA	-- ^b	Q	
MW-27B	130	140	--	X	Q	Q	SA	-- ^b	Q	
MW-56	150	160	--	X	Q	Q	SA	-- ^b	Q	

Notes:

a - Per WTR-MM-5, any existing data that has been collected at least quarterly for a minimum of one year may be used for investigation purposes. Data will be summarized in the investigation report.

b - Long-term sampling of uranium and other radionuclides, outside of the byproduct investigation per WTR-MM-5 is not currently planned at the existing ATUs. The plan will be modified if needed upon completion of the byproducts investigation.

c - Monitoring wells MW-49A and MW-49B are included to fulfill the MRP requirement to monitor well MW-49, an identification which does not correspond to any existing well.

Abbreviations:

-- - No monitoring required

ATU - agricultural treatment unit

Cr(VI) - hexavalent chromium

Cr(T) - total chromium

EC - electrical conductivity

ft bgs- feet below ground surface

MRP - Monitoring and Reporting Program (Attachment E of Board Order No. R6V-2014-0023; Water Board, 2014)

Q - quarterly

ORP - oxidation-reduction potential

SA - semi-annual

TDS - total dissolved solids

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	
C-01	10/09/13	FD	5.6	5.3	10.4	1,330	---	---	---	
	10/09/13		5.6	5.6	10.6	1,320	---	---	---	
	01/08/14		5.2	5.7	10.9	1,240	---	---	---	
	04/10/14		6.7	7.6	11.0	1,300	46.0	10.1J	36.0	
	04/10/14		---	---	---	---	32.0S	---	---	
	07/16/14		7.0	6.4	11.0	1,300	40.4	5.82	37.0	
C-02	10/09/13		7.2	7.7	26.0	2,120	---	---	---	
	01/08/14		8.5	8.0	23.3	1,860	---	---	---	
	04/10/14		8.7	8.8	23.0	1,900	43.2	12.7J	35.0	
	04/10/14		---	---	---	---	35.1S	---	---	
	07/16/14		8.1	7.6	23.0	1,900	51.4	4.48	38.0	
C-03	10/09/13		2.7	2.6	37.6	2,970	---	---	---	
	01/08/14		2.9	3.0	45.2	3,030	---	---	---	
	04/10/14		3.1	3.4	41.0	3,200	59.8	15.2J	56.0	
	04/10/14		---	---	---	---	38.2S	---	---	
	07/16/14		2.9	2.7	45.0	3,500	43.4	7.17	52.0	
C-04	10/09/13		6.6	6.5	9.43	950	---	---	---	
	01/08/14		5.2	5.4	9.65	946	---	---	---	
	04/10/14		7.9	7.6	9.30	960	39.4	5.63J	32.0	
	04/10/14		---	---	---	---	25.3S	---	---	
	07/16/14		FD	7.3	6.5	10.0	950	45.1	4.98	32.0
	07/16/14		7.3	6.3	10.0	960	66.1	ND (6.27)	33.0	
EX-01	10/09/13	FD	6.8	6.6	15.0	1,330	---	---	---	
	10/09/13		6.9	6.6	15.3	1,320	---	---	---	
	01/08/14		6.6	7.3	16.9	1,340	---	---	---	
	04/10/14		12.0	10.0	---	---	82.8	12.8J	50.0	
	04/10/14		---	---	---	---	33.4JS	---	---	
	07/16/14		8.9	8.2	---	---	76.6	8.61	54.0	

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-02	10/09/13		21.3	19.5	15.0	1,700	---	---	---
	01/08/14		16.4	17.3	16.9	1,760	---	---	---
	07/16/14		20.0	18.0	---	---	74.9	4.19	53.0
EX-03	10/09/13		6.6	6.2	15.6	2,860	---	---	---
	03/06/14		4.4	3.9	12.0	3,100	---	---	---
	04/10/14		5.6	5.3	---	---	46.4JS	47.9J	77.0
	04/10/14		---	---	---	---	46.4JS	---	---
	07/16/14	FD	4.8	4.4	---	---	94.0	ND (6.36)	85.0
	07/16/14		4.9	4.2	---	---	78.0	9.28	83.0
EX-04	10/09/13		2.1	3.5	13.4	3,760	---	---	---
	01/08/14	FD	1.5	3.4	14.6	3,840	---	---	---
	01/08/14		1.6	3.4	14.8	3,860	---	---	---
	04/10/14		1.8	1.8	---	---	55.6JS	26.2J	110
	04/10/14		---	---	---	---	55.6JS	---	---
	07/16/14		2.1	1.9	---	---	92.4J	ND (9.16)	120
EX-09	10/09/13		1.1	1.2	5.92	411	---	---	---
	01/08/14		1.0	1.2	5.19	430	---	---	---
	04/15/14	FD	ND (0.06)	ND (1.0)	---	---	11.2	ND (4.00)	5.90
	04/15/14		ND (0.06)	ND (1.0)	---	---	7.07	ND (4.00)	5.50
	07/25/14		ND (0.06)	ND (1.0)	---	---	6.99	ND (4.00)	4.40
EX-23	10/09/13		2.7	2.8	14.5	3,010	---	---	---
	01/08/14		2.0	2.2	9.25	3,130	---	---	---
	04/10/14		---	---	---	---	49.1JS	24.5J	110
	04/10/14		---	---	---	---	49.1JS	---	---
	07/16/14		2.7	---	---	---	131	13.5	110
EX-24	10/09/13		1.9	1.9	95.5	4,020	---	---	---
	01/08/14		1.5	1.7	116	3,980	---	---	---
	04/10/14		---	---	---	---	96.6	24.4J	100
	04/10/14		---	---	---	---	21.0JS	---	---
	07/16/14		1.0	---	---	---	92.3	ND (10.1)	110

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-25	10/09/13		4.2	4.6	27.9	3,030	---	---	---
	01/08/14		4.5	4.8	31.6	2,900	---	---	---
	04/10/14		---	---	---	---	54.8JS	14.6J	77.0
	04/10/14		---	---	---	---	54.8JS	---	---
	07/16/14		4.5	---	---	---	90.4	8.27	76.0
EX-26	10/09/13		24.8	22.7	13.7	1,880	---	---	---
	01/08/14		25.6	26.5	14.0	1,810	---	---	---
	04/10/14		---	---	---	---	79.8	21.1J	51.0
	04/10/14		---	---	---	---	45.4JS	---	---
	07/16/14		22.0	---	---	---	60.5	5.70	51.0
EX-27	10/09/13		9.7	9.1	19.2	2,300	---	---	---
	01/08/14	FD	4.2	4.4	19.0	3,170	---	---	---
	01/08/14		4.3	4.5	19.4	3,210	---	---	---
	04/10/14		---	---	---	---	56.7JS	15.8J	100
	04/10/14		---	---	---	---	56.7JS	---	---
	07/18/14		1.3	---	---	---	141J	15.0	110
EX-28	10/09/13		6.2	5.7	23.3	3,040	---	---	---
	01/08/14		5.4	5.8	23.8	2,880	---	---	---
	04/10/14		---	---	---	---	87.8	11.8J	71.0
	04/10/14		---	---	---	---	43.9JS	---	---
	07/16/14		5.7	---	---	---	67.6	13.5	74.0
EX-31	10/09/13		4.7	4.8	9.89	1,330	---	---	---
	01/08/14		4.7	5.2	9.70	1,300	---	---	---
	04/08/14		4.8	4.7	9.30	1,400	42.7J	ND (4.00)	47.0
	04/08/14		---	---	---	---	29.5S	---	---
	07/18/14		4.3	4.0	10.0	1,400	46.3J	6.29	33.0

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-32	10/09/13		2.3	2.7	4.13	1,260	---	---	---
	01/08/14		0.74	ND (1.0)	4.12	1,320	---	---	---
	04/18/14		2.1	2.2	3.30	1,400	36.6	ND (4.00)	23.0
	04/18/14		---	---	---	---	22.2S	---	---
	07/18/14		2.1	2.1	4.10	1,400	28.8J	4.60	22.0
EX-33	10/09/13		4.9	5.0	14.0	2,380	---	---	---
	01/08/14		4.5	4.8	15.9	2,580	---	---	---
	04/08/14		4.1	4.3	16.0	3,000	41.5J	4.97	47.0
	04/08/14		---	---	---	---	36.6JS	---	---
	07/18/14		4.4	4.2	18.0	3,100	43.0J	11.0	43.0
EX-34	10/09/13		19.8	18.6	12.0	1,370	---	---	---
	01/08/14		20.1	21.5	12.0	1,380	---	---	---
	04/08/14		---	---	---	---	57.3J	6.91	45.0
	04/08/14		---	---	---	---	35.3S	---	---
	07/18/14		21.0	---	---	---	60.0J	8.31	45.0
EX-35	10/09/13		2.8	3.4	21.5	3,030	---	---	---
	01/08/14	FD	2.9	3.8	20.2	2,620	---	---	---
	01/08/14		2.9	3.4	19.8	2,610	---	---	---
	04/08/14		3.0	3.3	20.0	3,000	50.2J	ND (4.78)	40.0
	04/08/14		---	---	---	---	33.9JS	---	---
	07/18/14		2.8	2.8	22.0	3,000	36.1J	9.09	40.0
G-1R	10/09/13		1.4	1.5	9.15	3,890	---	---	---
	01/08/14		1.3	1.5	8.61	3,690	---	---	---
	04/08/14		1.7	1.4	7.80	4,100	29.9JS	ND (5.54)	35.0
	04/08/14		---	---	---	---	29.9JS	---	---
	07/18/14		1.3	1.2	8.70	4,400	30.9J	6.26	37.0

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
G-2R	10/09/13	FD	3.0	3.4	18.3	2,710	---	---	---
	10/09/13		3.0	3.6	20.7	2,460	---	---	---
	01/08/14		1.7	1.8	35.6	4,360	---	---	---
	04/08/14	FD	1.7	1.5	36.0	4,100	75.8J	7.03	58.0
	04/08/14		---	---	---	---	40.8JS	---	---
	07/18/14		1.2J	1.5	37.0	5,200	66.3J	ND (8.22)	55.0
	07/18/14		0.54J	1.5	38.0	5,200	74.0J	10.2	53.0
G-5R	10/09/13	FD	3.8	3.6	9.22	1,300	---	---	---
	01/08/14		3.6	3.6	10.2	1,320	---	---	---
	01/08/14		3.6	3.6	10.1	1,330	---	---	---
	04/08/14		3.7	3.6	6.90	1,200	30.9J	4.17	23.0
	07/18/14		3.6	3.3	7.40	1,100	19.6J	ND (4.00)	18.0
IW-01	10/09/13		30.3	30.5	13.4	1,320	---	---	---
	01/08/14		26.5	26.4	11.9	1,280	---	---	---
	04/18/14		28.0	27.0	11.0	1,300	58.4	7.49	41.0
	04/18/14		---	---	---	---	23.9S	---	---
	07/17/14		26.0	28.0	11.0	1,300	46.4J	6.11	35.0
IW-02	10/09/13		16.6	14.9	23.3	1,070	---	---	---
	01/08/14		14.8	14.8	14.9	1,100	---	---	---
	04/18/14		14.0	13.0	14.0	1,100	36.6	8.89	31.0
	04/18/14		---	---	---	---	25.2S	---	---
	07/17/14		15.0	17.0	14.0	1,000	39.7J	7.38	28.0
IW-03	10/09/13	FD	1.4	1.7	15.2	1,130	---	---	---
	10/09/13		1.4	2.0	17.8	1,120	---	---	---
	01/08/14		5.4	5.2	18.5	1,110	---	---	---
	04/18/14		5.0	4.7	16.0	1,100	52.5	9.18	35.0
	04/18/14		---	---	---	---	28.8S	---	---
	07/17/14		ND (0.06)	ND (1.0)	13.0	1,100	25.7J	4.65	18.0

Table 5-3

Analytical Results for Extracted Groundwater, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
Y-01	04/23/14		---	---	---	1,600	45.9J	4.29	32.0
	04/23/14		---	---	---	---	20.3S	---	---
	07/17/14		12.0	---	---	1,600	35.1J	7.23	29.0
Y-03	04/23/14		---	---	---	1,600	51.8J	6.53	32.0
	04/23/14		---	---	---	---	16.9S	---	---
	07/17/14		11.0	---	---	1,700	40.5J	6.43	31.0

Notes:

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

-- = not analyzed

µg/L = micrograms per liter

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

mg/L = milligrams per liter

ND (x.x) = not detected at or above the reporting limit shown

pCi/L = picocuries per liter

S = screening

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Cottrell (OU2)										
MW-55A	Deep Zone Upper Aquifer	10/14/13		0.8	ND (1.0)	0.76	540	8.10	6.70	6.40
		01/22/14		ND (0.06)	ND (1.0)	ND (0.50)	533	---	---	---
		04/16/14		0.48	ND (1.0)	0.66	530	8.67	ND (4.00)	8.00
		04/16/14		---	---	---	---	6.37S	---	---
		07/23/14		ND (0.06)	ND (1.0)	0.43	520	9.25	4.17	7.20
MW-55S	Shallow Zone Upper Aquifer	10/14/13		2.6	3.1	25.8	4,000	58.0	23.0	59.0
		01/15/14		2.4	3.5	26.2	4,160	---	---	---
		01/15/14	FD	2.4	3.2	25.8	4,180	---	---	---
		04/16/14		2.9	3.3	24.0	3,900	65.3	13.3J	69.0
		04/16/14		---	---	---	---	47.3S	---	---
		07/23/14		2.7	2.8	24.0	4,000	70.3	13.3	65.0
MW-68D	Deep Zone Upper Aquifer	10/16/13		9.4	10.0	14.7	1,940	---	---	---
		01/20/14		8.4	9.4	13.8	1,660	---	---	---
		04/11/14		12.0	12.0	16.0	1,700	60.4	19.7	60.0
		04/11/14		---	---	---	---	43.6S	---	---
		07/18/14		12.0	11.0	18.0	1,800	70.8J	9.55	50.0
MW-68S	Shallow Zone Upper Aquifer	10/16/13		0.85	1.6	49.2	3,650	---	---	---
		01/20/14		1.0	2.0	48.8	3,720	---	---	---
		04/11/14		1.9	2.3	38.0	3,200	55.7	6.96	64.0
		04/11/14		---	---	---	---	49.9S	---	---
		07/18/14		1.6	2.4	40.0	3,800	73.0J	9.07	55.0
		Q3 Average ^a		4.1	4.2	20.6	2,530	55.8	9.02	44.3
		Annual Average ^{a, b}		3.7	4.1	21.3	2,480	48.0	10.8	44.4
		Q3 Maximum		12.0	11.0	40.0	4,000	73.0J	13.3	65.0
Annual Maximum		12.0	12.0	49.2	4,180	73.0J	23.0	69.0		
Q3 Minimum		ND (0.06)	ND (1.0)	0.43	520	9.25	4.17	7.20		
Annual Minimum		ND (0.06)	ND (1.0)	ND (0.50)	520	8.10	ND (4.00)	6.40		

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Desert View Dairy (OU2)										
DW-02	Shallow Zone Upper Aquifer	10/15/13		1.2	1.2	98.9	3,420	---	---	---
		01/24/14		1.2	1.2	113	3,530	---	---	---
		01/24/14	FD	1.3	1.3	111	3,520	---	---	---
		04/15/14		1.5	1.2	37.0	3,000J	90.7	13.1	77.0
		04/15/14		---	---	---	---	44.6S	---	---
		07/22/14		1.4	1.3	32.0	2,900	79.5	13.6	77.0
MW-127S1		10/11/13		1.5	2.1	---	---	---	---	---
		01/21/14		1.8	3.6	---	---	---	---	---
		03/06/14		2.1	2.5	---	---	---	---	---
		04/16/14		2.2	2.5	29.0	4,100	82.6	17.5J	81.0
		04/16/14		---	---	---	---	51.1S	---	---
		04/16/14	FD	2.2	2.4	30.0	4,000	81.4	19.3J	81.0
		04/16/14	FD	---	---	---	---	47.8S	---	---
		07/22/14		2.1	2.5	29.0	4,500	71.7	11.3	81.0
		07/22/14	FD	2.1	2.6	29.0	4,500	87.2	15.7	75.0
MW-127S2		10/11/13		1.2	1.6	---	---	---	---	---
		01/21/14		1.2	1.9	---	---	---	---	---
		04/16/14		1.3	1.4	19.0	3,000	51.4	10.9J	50.0
		04/16/14		---	---	---	---	34.7S	---	---
		07/22/14		1.3	1.5	19.0	3,500	53.0	5.92	45.0
MW-170S		10/15/13		1.8	2.6	---	---	---	---	---
		01/22/14		2.0	2.1	---	---	---	---	---
		04/15/14		2.2	2.1	70.0	4,100	123	9.58	86.0
		04/15/14		---	---	---	---	68.7S	---	---
		07/21/14		2.0	2.5	68.0	3,600	89.8	6.61	86.0
MW-28A		01/15/14		17.5	23.5	---	1,110	---	---	---
		04/11/14		23.0	23.0	---	1,100	34.4	4.76	27.0
		04/11/14		---	---	---	---	21.6S	---	---
MW-28B	Deep Zone Upper Aquifer	10/09/13		28.0	25.0	---	---	---	---	---
		01/15/14		23.9	25.3	---	922	---	---	---

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
MW-28B	Deep Zone Upper Aquifer	04/11/14		24.0	22.0	---	910	34.4	8.56	24.0
		04/11/14		---	---	---	---	17.0S	---	---
		07/25/14		14.0	15.0	9.40	820	17.0	6.63	18.0
MW-29	Shallow Zone Upper Aquifer	10/15/13		1.9	2.0	15.9	3,940	---	---	---
		01/21/14		3.3	4.0	18.1	3,590	---	---	---
		01/21/14	FD	3.3	4.0	18.5	3,550	---	---	---
		04/15/14		1.3	1.4	---	4,100	202	12.5	150
		04/15/14		---	---	---	---	83.2S	---	---
		04/15/14	FD	1.2	1.3	---	4,100	207	12.5	150
		04/15/14	FD	---	---	---	---	90.8S	---	---
MW-31	Deep Zone Upper Aquifer	07/21/14		1.1	1.5	10.0	3,700	209	ND (5.94)	140
		10/15/13		4.1	4.7	19.2	3,220	---	---	---
		01/21/14		3.8	4.3	18.3	3,060	---	---	---
		04/14/14		3.7	3.6	13.0	3,100J	104	12.3	75.0
		04/14/14		---	---	---	---	55.5S	---	---
MW-42B1		07/17/14		3.2	3.4	14.0	2,900	36.7J	ND (6.29)	69.0
		10/14/13		37.5	35.8	14.1	1,320	---	---	---
		01/24/14		34.4	33.6	16.4	1,300	---	---	---
		04/14/14		30.0	29.0	---	1,500	55.4	10.8	48.0
		04/14/14		---	---	---	---	30.6S	---	---
MW-42B2		07/25/14		33.0	33.0	14.0	1,300	31.8J	7.83	44.0
		10/14/13		48.6	43.0	12.9	1,230	---	---	---
		01/24/14		47.2	47.6	14.3	1,160	---	---	---
		01/24/14	FD	46.9	45.2	14.1	1,140	---	---	---
		04/14/14		49.0	47.0	---	1,200	50.0J	8.94	44.0
MW-63	Shallow Zone Upper Aquifer	04/14/14	FD	49.0	48.0	---	1,200	65.1J	10.0	41.0
		07/25/14		45.0	48.0	12.0	1,200	45.4	9.41	46.0
		10/14/13		0.99	1.1	41.4	3,100	---	---	---
		10/14/13	FD	0.98	1.1	40.4	3,160	---	---	---
		01/22/14		1.2	1.3	38.8	3,030	---	---	---
		04/15/14		1.0	1.4	27.0	2,900J	117	18.3	84.0

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
				µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
MW-63	Shallow Zone Upper Aquifer	04/15/14		---	---	---	---	63.7S	---	---
		04/15/14	FD	1.0	1.4	26.0	2,900J	124	17.2	83.0
		04/15/14	FD	---	---	---	---	52.6S	---	---
		07/21/14		1.1	1.7	24.0	2,800	105J	ND (5.16)	88.0
		07/21/14	FD	1.1	1.6	24.0	2,800	75.6J	9.33	89.0
MW-71D	Deep Zone Upper Aquifer	10/16/13		2.6	3.1	7.50	1,210	---	---	---
		01/20/14		2.5	2.8	7.12	1,080	---	---	---
		04/14/14		2.6	2.9	8.00	1,500	43.9	13.6	35.0
		04/14/14		---	---	---	---	31.7S	---	---
		07/18/14		2.3	2.4	18.0	2,700	67.2J	8.33	49.0
MW-71S	Shallow Zone Upper Aquifer	10/16/13		1.4	2.3	75.8	5,300	---	---	---
		01/20/14		1.6	2.8	69.5	5,410	---	---	---
		04/14/14		1.4	1.6	67.0	6,000J	90.1	ND (12.9)	92.0
		04/14/14		---	---	---	---	66.4S	---	---
		07/18/14		1.3	1.7	53.0	5,700	79.7J	17.8	97.0
MW-83D		10/17/13		0.65	1.2	67.4	3,180	---	---	---
		01/22/14		0.72	1.9	67.8	3,780	---	---	---
		04/15/14		0.88	1.4	55.0	3,500J	111	19.4	95.0
		04/15/14		---	---	---	---	77.4S	---	---
		07/21/14		0.74	1.4	53.0	3,500	107	ND (5.54)	93.0
MW-83S		10/01/13		1.0	2.1	53.0	3,600	---	---	---
		01/22/14		1.0	2.5	61.1	3,460	---	---	---
		04/15/14		1.5	2.5	46.0	3,600	119	9.98	86.0
		04/15/14		---	---	---	---	67.4S	---	---
		07/21/14		1.4	2.2	40.0	3,400	75.6	21.1	74.0
MW-89D	Deep Zone Upper Aquifer	10/17/13		0.69	ND (1.0)	12.2	1,680	---	---	---
		01/24/14		0.66	ND (1.0)	11.6	1,620	---	---	---
		04/15/14		ND (0.77)	ND (1.0)	8.00	1,500J	25.4	5.89	18.0
		04/15/14		---	---	---	---	16.4S	---	---
		07/24/14		0.57	ND (1.0)	6.20	1,400	16.6	ND (4.00)	13.0
MW-89S	Shallow Zone Upper Aquifer	10/17/13		3.0	3.3	52.5	4,040	---	---	---

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
				µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
MW-89S	Shallow Zone Upper Aquifer	01/24/14		2.7	3.3	68.7	4,060	---	---	---
		04/15/14		3.1	3.3	48.0	4,200	124	9.57	58.0
		04/15/14		---	---	---	---	32.0S	---	---
		07/24/14		2.5	4.0	48.0	4,100	74.8	ND (12.9)	82.0
		09/04/14		3.0	3.1	---	---	---	---	---
		Q3 Average ^a		7.1	7.7	28.1	3,000	73.5	8.72	68.9
		Annual Average ^{a, b}		8.1	8.4	35.6	2,880	80.6	10.1	67.7
		Q3 Maximum		45.0	48.0	68.0	5,700	209	21.1	140
		Annual Maximum		49.0	48.0	113	6,000J	209	21.1	150
		Q3 Minimum		0.57	ND (1.0)	6.20	820	16.6	ND (12.9)	13.0
		Annual Minimum		ND (0.77)	ND (1.0)	6.20	820	16.6	ND (12.9)	13.0

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Gorman (OU2)										
MW-105D	Deep Zone Upper Aquifer	10/10/13		ND (0.06)	ND (1.0)	---	---	---	---	---
		01/14/14		ND (0.06)	ND (1.0)	---	---	---	---	---
		04/16/14		ND (0.085)	ND (1.0)	ND (0.05)	320	5.83	ND (4.00)	4.20
		07/22/14		ND (0.06)	ND (1.0)	ND (0.05)	330	4.73	ND (4.00)	4.30
MW-105S	Shallow Zone Upper Aquifer	10/10/13		2.4	2.5	---	---	---	---	---
		01/14/14		2.1	2.8	---	---	---	---	---
		04/16/14		2.7	2.8	5.20	710	26.4	5.92J	21.0
		07/22/14		2.8	3.2	4.80	740	23.3	4.42	21.0
		09/04/14		2.4	2.4	---	---	---	---	---
MW-206S		06/04/14		1.6	1.3	3.20	5,800	ND (17.2)	9.91	20.0
		07/10/14		1.4	1.3	4.60	6,600	ND (33.1)	ND (26.9)	24.0
MW-70D	Deep Zone Upper Aquifer	10/16/13		1.2	1.8	20.6	2,130	---	---	---
		01/20/14		1.4	2.0	28.6	2,920	---	---	---
		04/11/14		1.5	1.6	20.0	2,300	76.5	7.80	54.0
		04/11/14		---	---	---	---	49.7S	---	---
		07/24/14		1.7	2.2	24.0	2,800	61.8	20.4	66.0
MW-70S	Shallow Zone Upper Aquifer	10/16/13		1.4	2.3	59.3	4,640	---	---	---
		01/20/14		0.75	1.4	60.6	4,920	---	---	---
		04/11/14		1.7	2.0	53.0	3,200	70.9	17.7	66.0
		04/11/14		---	---	---	---	47.0S	---	---
		07/24/14		1.6	2.0	57.0	5,200	63.4	ND (19.0)	77.0
MW-84D	Deep Zone Upper Aquifer	10/07/13		0.36	ND (1.0)	3.30	960	---	---	---
		01/22/14		0.16	ND (1.0)	4.12	1,100	---	---	---
		04/16/14		0.36	ND (1.0)	3.40	1,100	ND (3.00)	ND (4.00)	3.80
		04/16/14		---	---	---	---	ND (3.00)S	---	---
		07/22/14		0.23	ND (1.0)	3.30	1,100	ND (5.32)	ND (4.00)	4.00
MW-84S	Shallow Zone Upper Aquifer	10/14/13		1.6	1.8	10.2	2,470	---	---	---
		10/14/13	FD	1.6	1.8	10.7	2,560	---	---	---
		01/22/14		1.7	1.8	10.4	3,490	---	---	---
		04/16/14		1.9	2.0	8.40	3,100	32.9	6.42J	29.0

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Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	
MW-84S	Shallow Zone Upper Aquifer	04/16/14		---	---	---	---	22.1S	---	---	
		07/22/14		1.8	2.2	7.00	3,500	28.6	5.91	27.0	
MW-85D	Deep Zone Upper Aquifer	10/17/13		ND (0.06)	ND (1.0)	ND (0.50)	240	---	---	---	
		10/17/13	FD	ND (0.06)	ND (1.0)	ND (0.50)	237	---	---	---	
		01/24/14		ND (0.06)	ND (1.0)	ND (0.50)	247	---	---	---	
		04/11/14		ND (0.06)	ND (1.0)	0.14	240	3.48	ND (4.00)	2.10	
		07/24/14		ND (0.06)	ND (1.0)	0.16	260	3.32	ND (4.00)	1.90	
		07/24/14	FD	ND (0.06)	ND (1.0)	0.20	240	ND (3.00)	ND (4.00)	2.00	
MW-85S	Shallow Zone Upper Aquifer	10/17/13		1.3	2.0	9.88	1,900	---	---	---	
		01/24/14		1.7	1.7	11.0	1,960	---	---	---	
		04/11/14		1.8	1.8	9.40	2,200	21.1	ND (5.49)	19.0	
		04/11/14		---	---	---	---	15.7S	---	---	
		07/24/14		1.7	2.0	8.80	2,700	17.2	5.98	19.0	
MW-86D	Deep Zone Upper Aquifer	10/17/13		1.3	1.8	0.521	440	---	---	---	
		01/22/14		1.4	1.5	3.37	458	---	---	---	
		04/16/14		1.6	1.7	---	450	16.6	ND (4.00)	8.40	
		07/24/14		1.4	1.9	0.57	450	7.72J	ND (4.00)	8.30	
MW-86S	Shallow Zone Upper Aquifer	10/17/13		4.3	4.8	16.0	1,320	---	---	---	
		01/22/14		4.5	5.5	17.2	1,320	---	---	---	
		04/16/14		5.2	5.2	---	1,300	43.8	13.2J	44.0	
		04/16/14		---	---	---	---	31.0S	---	---	
		07/24/14		4.7	5.5	15.0	1,300	45.4	10.6	44.0	
			Q3 Average ^a		1.6	2.0	11.4	2,270	25.0	7.11	27.0
			Annual Average ^{a, b}		1.5	1.9	13.4	2,010	26.7	6.82	25.8
	Q3 Maximum		4.7	5.5	57.0	6,600	63.4	20.4	77.0		
	Annual Maximum		5.2	5.5	60.6	6,600	76.5	20.4	77.0		
	Q3 Minimum		ND (0.06)	ND (1.0)	ND (0.05)	240	ND (17.2)	ND (19.0)	1.90		
	Annual Minimum		ND (0.06)	ND (1.0)	ND (0.05)	237	ND (17.2)	ND (19.0)	1.90		

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Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Ranch (OU2) ^c										
MW-14B	Deep Zone Upper Aquifer	10/17/13		35.8	32.7	5.18	626	---	---	---
		01/15/14		31.1	33.6	5.03	603	---	---	---
		04/11/14		---	---	---	880	24.1	9.28	24.0
		07/18/14		35.0	32.0	5.30	640	28.2J	4.13J	27.0
MW-14S	Shallow Zone Upper Aquifer	11/08/13		30.0	27.0	12.0	1,300	---	---	---
		02/05/14		29.0	28.0	12.0	1,300	---	---	---
		05/07/14		30.0	27.0	12.0	1,300	55.3	6.54	42.0
		08/06/14		29.0	29.0	12.0	1,200	46.7	4.03	40.0
MW-22B	Deep Zone Upper Aquifer	10/15/13		33.3	33.3	11.8	1,140	---	---	---
		01/14/14		32.3	35.0	10.6	1,050	---	---	---
		01/14/14	FD	32.2	38.4	10.6	1,010	---	---	---
		04/11/14		---	---	---	1,000	48.7	9.53	38.0
		04/11/14		---	---	---	---	30.7S	---	---
		07/25/14		29.0	29.0	4.30	1,100	44.9	6.38	39.0
MW-27A	Shallow Zone Upper Aquifer	01/14/14		11.9	12.6	---	---	---	---	---
		04/08/14		---	---	---	1,200	47.3	7.63	31.0
		07/23/14		12.0	11.0	17.0	1,200	36.6	7.10	32.0
MW-27B	Deep Zone Upper Aquifer	01/14/14		4.0	4.4	---	976	---	---	---
		04/08/14		---	---	---	930	58.3	8.00	38.0
		07/23/14		6.8	6.3	12.0	940	38.9	6.29	39.0
MW-56		10/15/13		4.4	4.5	---	---	---	---	---
		10/15/13	FD	4.4	4.2	---	---	---	---	---
		01/15/14		4.8	5.4	---	---	---	---	---
		04/16/14		5.4	5.6	---	960	43.1	10.1	39.0
		04/16/14		---	---	---	---	23.7S	---	---
		07/22/14		5.4	5.6	16.0	1,100	47.6	6.29	40.0

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
				µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
			Q3 Average ^a	19.5	18.8	11.1	1,030	40.5	5.70	36.2
			Annual Average ^{a, b}	20.5	20.3	10.4	1,020	43.3	7.11	35.8
			Q3 Maximum	35.0	32.0	17.0	1,200	47.6	7.10	40.0
			Annual Maximum	35.8	38.4	17.0	1,300	58.3	10.1	42.0
			Q3 Minimum	5.4	5.6	4.30	640	28.2J	4.03	27.0
			Annual Minimum	4.0	4.2	4.30	603	24.1	4.03	24.0

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Yang (OU2)										
MW-21A	Upper Aquifer	04/14/14		1.9	1.8	7.50	3,400	89.3JS	8.03J	120
		04/14/14		---	---	---	---	89.3JS	---	---
		04/14/14	FD	1.9	1.9	7.50	3,400J	66.1JS	32.9J	120
		04/14/14	FD	---	---	---	---	66.1JS	---	---
		07/17/14		1.9	2.6	8.50	3,400	173J	6.71	100
		07/17/14	FD	1.9	2.5	7.70	3,300	131J	ND (5.70)	100
MW-21B1	Deep Zone Upper Aquifer	10/15/13		9.3	9.6	19.2	1,550	---	---	---
		01/21/14		10.2	10.2	14.8	2,020	---	---	---
		04/14/14		12.0	12.0	18.0	1,600	46.3	8.74	45.0
		04/14/14		---	---	---	---	32.1S	---	---
		07/17/14		7.6	8.5	16.0	1,500	49.7J	5.80	34.0
MW-32B1		10/15/13		4.7	4.3	9.86	1,200	---	---	---
		01/21/14		4.3	4.3	9.87	1,150	---	---	---
		04/16/14		17.0	17.0	11.0	1,000	44.8	7.90	35.0
		04/16/14		---	---	---	---	26.9S	---	---
		07/23/14		5.1	4.7	9.40	1,300	37.2	5.51	33.0
MW-32S	Shallow Zone Upper Aquifer	10/15/13		3.0	3.2	20.0	2,260	37.0	ND (22.0)	43.0
		01/15/14		3.0	4.0	21.0	2,360	---	---	---
		04/16/14		3.5	3.4	18.0	2,600	76.8	17.8	59.0
		04/16/14		---	---	---	---	46.9S	---	---
		07/23/14		3.4	3.8	19.0	2,400	61.2	6.87	60.0
		07/23/14	FD	3.4	3.7	19.0	2,400	59.1	7.56	56.0
MW-49A	Deep Zone Upper Aquifer	10/09/13		3.6	3.3	---	---	---	---	---
		10/09/13	FD	3.6	3.6	---	---	---	---	---
		01/14/14		3.7	3.8	---	1,080	---	---	---
		04/16/14		3.7	4.0	---	960	47.6	5.68	35.0
		04/16/14		---	---	---	---	20.3S	---	---
		07/22/14		3.8	3.9	14.0	1,100	45.0	4.20	36.0
MW-49B		01/14/14		---	---	---	1,100	---	---	---
		04/16/14		---	---	---	1,100	45.3	9.62	39.0

Table 5-4

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Aquifer Zone	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
				µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
MW-49B	Deep Zone Upper Aquifer	04/16/14		---	---	---	---	22.6S	---	---
		07/22/14		2.0	2.0	16.0	1,100	48.5	4.66	38.0
MW-88D		10/01/13		ND (0.06)	ND (1.0)	5.40	850	---	---	---
		03/06/14		ND (0.06)	ND (1.0)	4.80	810	---	---	---
		04/15/14		ND (0.11)	ND (1.0)	---	880	24.6	8.80	17.0
		04/15/14		---	---	---	---	18.6S	---	---
		07/21/14		0.2	ND (1.0)	5.70	890	23.7	5.31	20.0
MW-88S	Shallow Zone Upper Aquifer	10/17/13		5.0	5.5	16.0	1,170	---	---	---
		01/24/14		5.0	4.5	17.3	1,220	---	---	---
		04/15/14		5.7	5.6	---	1,300	41.1	8.89	37.0
		04/15/14		---	---	---	---	30.1S	---	---
		07/21/14		5.5	6.1	15.0	1,300	47.7	5.74	41.0
		Q3 Average ^a		3.7	4.0	13.0	1,620	60.8	5.69	45.3
		Annual Average ^{a, b}		4.6	4.8	13.5	1,520	58.2	9.22	46.6
		Q3 Maximum		7.6	8.5	19.0	3,400	173J	7.56	100
		Annual Maximum		17.0	17.0	21.0	3,400	173J	32.9J	120
		Q3 Minimum		0.2	ND (1.0)	5.70	890	23.7	ND (22.0)	20.0
Annual Minimum		ND (0.06)	ND (1.0)	4.80	810	23.7	ND (22.0)	17.0		

Analytical Results for Groundwater Monitoring Wells, Current Quarter and Previous Three Quarters
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Notes:

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

- ^a Averages were calculated using the maximum concentration found between primary and field duplicate samples. For non-detects, half the reporting limit was used.
- ^b Rolling average for the last 12 months of available data.
- ^c Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2. Therefore, the Ranch ATU is considered to be in OU2.

-- = not analyzed

µg/L = micrograms per liter

Q2 = Second Quarter 2014

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

OU = Operational Unit

mg/L = milligrams per liter

ND (x.x) = not detected at the reporting limit shown

pCi/L = picocuries per liter

Table 5-5

Analytical Results for Orthophosphate*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Extraction Well Rehabbed in Q2 2014	Downgradient/Crossgradient Monitoring Well Sampled in Q3 2014	Sample Date	Sample Type	Marker Compound Result Orthophosphate (mg/L)
EX-02	MW-21B	7/17/2014		ND (0.10)
	MW-21B1	7/17/2014		ND (0.20)
	MW-43	7/17/2014		ND (0.50)
X-04	SA-MW-14S	7/7/2014		ND (0.10)
	SA-MW-15S	7/10/2014		ND (0.10)
		7/10/2014	FD	ND (0.10)
X-05	SA-MW-15D	7/7/2014		ND (0.10)
	SA-MW-15S	7/10/2014		ND (0.10)
		7/10/2014	FD	ND (0.10)
X-08	MW-11B	7/21/2014		ND (0.10)
	SA-MW-26D	7/15/2014		0.12
	SA-MW-26S	7/15/2014		ND (0.10)
X-09	X-10	7/15/2014		ND (0.20)
X-12	CA-RW-16	7/17/2014		ND (0.10)
X-13	CA-MW-106D	7/22/2014		ND (0.10)
	CA-MW-106S	7/22/2014		0.29J
	CA-MW-107D	7/21/2014		ND (0.10)
	CA-MW-107S	7/21/2014		ND (0.10)
	CA-MW-109D	7/18/2014		ND (0.10)
	CA-MW-109S	7/18/2014		ND (0.10)

Notes:

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

mg/L = milligrams per liter

ND (x.x) = parameter is not detected at or above the reporting limit shown

TABLE 6-1
Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Criteria² For Actually Affected Well	<p>An “actually affected domestic well” is a domestic well located within one-mile downgradient or cross-gradient of the defined chromium plume with one of the following characteristics:</p> <ul style="list-style-type: none"> • Cr(VI) or Cr(T) concentrations that exceed maximum background levels³ (if the well previously had concentrations below maximum background levels) • Cr(VI) or Cr(T) concentrations that increase by 10 percent or more (if the well previously had concentrations that exceeded maximum background levels) 	<p>An “actually affected domestic well” is a domestic well with one of the following characteristics:</p> <ul style="list-style-type: none"> • Concentrations above a California primary or secondary MCLs if the well currently contains concentrations that are less than California primary or secondary MCL or water quality objective; or • a 10% increase above current levels if the well has concentrations that currently exceed a California primary MCL • a 20% increase above current levels if the well has concentrations that currently exceed a California SMCL Level or water quality objective; • a 20% increase above current levels if the well has concentrations that currently are less than a California primary or secondary MCL or water quality objective. 	<p>An “actually affected domestic well” includes:</p> <ul style="list-style-type: none"> • All domestic wells where groundwater drawdown of more than 25 percent of the potentially affected wetted screen depth within the saturated zone has occurred due to remedial pumping compared to the pre-remedial reference levels, unless it can be demonstrated that the well remains capable of providing an adequate flow rate for domestic supply and the well owner concurs that the flow rate is adequate for their use • All domestic wells where groundwater drawdown of at least 10 feet occurs <u>and</u> water quality sampling shows at least a 10 percent increase over pre-remedial reference conditions for arsenic, manganese, uranium, or gross alpha

¹ Total dissolved solids, nitrate, uranium, and radionuclides (gross alpha and gross beta).

² As noted in the significance criteria, the discharger may submit evidence if it believes the increase in a specific instance is not statistically significant.

³ The maximum background levels for Cr(VI) and Cr(T) are currently defined as 3.1 µg/L and 3.2 µg/L, respectively (CH2M HILL, 2007)

TABLE 6-1
Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Criteria For Actually Affected Well (cont)		<p>“Actually affected monitoring wells” will be defined using the criteria above for “actually affected domestic wells”.</p> <p>An “actually affected agricultural well” includes:</p> <ul style="list-style-type: none"> All agricultural wells where any of the following has caused an increase in TDS or otherwise affected water quality such that (1) agricultural yields are predicted to be reduced by at least 25% or (2) agricultural product is predicted to have substantial or likely reduction in quality or quantity. 	<p>An “actually affected agricultural well” includes:</p> <ul style="list-style-type: none"> Agricultural wells where groundwater drawdown of more than 25 percent of the potentially affected wetted well screen depth has occurred due to remedial pumping, compared to the pre-remedial reference levels, unless it can be demonstrated that the well remains capable of providing an adequate flow rate for agricultural supply and the well owner concurs that the flow rate is adequate for their use
Criteria⁴ For Potentially Affected Well	<p>A “potentially affected domestic well” is a domestic well that has an increase in chromium concentrations due to remedial actions and which:</p> <ul style="list-style-type: none"> Is located within one-mile downgradient or cross-gradient of the defined chromium plume that is predicted to have any of the conditions for an “actually affected 	<p>A “potentially affected domestic well” includes:</p> <ul style="list-style-type: none"> All domestic wells located within 0.5 miles downgradient or 0.25 miles cross gradient of an “actually affected domestic well” or an “affected monitoring well” All domestic wells predicted to be within 0.5 miles downgradient or 0.25 miles cross gradient of an actually affected domestic well or an affected monitoring 	<p>A “potentially affected domestic well” is defined as follows:</p> <ul style="list-style-type: none"> All domestic wells where any of the above conditions is predicted to occur through groundwater modeling within 1 year <p>A “potentially affected agricultural well” is defined as follows:</p>

⁴ As noted in the significance criteria, the discharger may submit evidence if it believes the increase in a specific instance is not statistically significant.

TABLE 6-1

Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Criteria For Potentially Affected Well (cont)	domestic well” within 1 year as indicated by groundwater modeling	well in the next 12 months as predicted by groundwater flow modeling A “ potentially affected agricultural well ” includes: <ul style="list-style-type: none"> • Agricultural wells within 0.5 miles downgradient or 0.25 miles cross gradient of an “actually affected agricultural well” or an affected monitoring well (when no agricultural well exist within these intervals) • All agricultural wells where any of the above conditions is predicted to occur through groundwater flow modeling within one year. 	<ul style="list-style-type: none"> • All agricultural wells where any of the above conditions is predicted to occur through groundwater modeling within 1 year
Evaluation Used To Determine Well Classification	<ul style="list-style-type: none"> • Quarterly domestic well chromium results are analyzed to determine “actually affected domestic well” • Annual particle track modeling is completed to identify domestic wells as “potentially affected domestic well” within the next year or in the next three years 	<ul style="list-style-type: none"> • Quarterly ATU byproduct concentrations for domestic, agricultural wells and ATU monitoring wells are reviewed to determine “actually affected domestic well or agricultural well” or “actually affected monitoring well” • “potentially affected domestic wells” will be identified if within one-half mile downgradient or one-quarter mile cross 	<ul style="list-style-type: none"> • Quarterly water level data is analyzed to determine if the criteria for an “actually affected domestic well or agricultural well” is met • Annual particle track modeling is completed to identify domestic and agricultural wells with drawdown conditions that will meet the criteria for a

TABLE 6-1

Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Evaluation Used To Determine Well Classification (cont)		<p>gradient of an actually affected domestic well or affected monitoring well</p> <ul style="list-style-type: none"> “potentially affected agricultural wells” will be identified if within one-half mile downgradient or one-quarter mile cross gradient of an actually affected agricultural well or affected monitoring well Annual particle track modeling will be completed to identify wells as “potentially affected domestic well or agricultural well” within the next year. 	“potentially affected domestic or agricultural well” within the next year
Third Quarter 2014 “Actually Affected Wells”	<p>During the Third Quarter of 2014, there were no domestic wells with Cr(VI) or Cr(T) concentrations that exceeded background concentrations of 3.1 or 3.2 µg/L, respectively, for the first time.</p> <p>Two domestic wells (28-21 and 28-65) have previously exceeded Cr(VI)/Cr(T) concentrations of 3.1/3.2 µg/L. During the Third Quarter of 2014, well 28-21 did not exceed 3.1/3.2 µg/ concentrations (Table 6-2). PG&E purchased the property containing well 28-65 during the reporting period, so this well was not sampled. Therefore, no “actually affected domestic wells” were identified during the reporting period.</p> <p>The methodology for establishing pre-remedial reference values to aid in identifying “actually</p>	<p>A minimum of four quarters of data are needed to establish pre-remedial reference concentrations. Because initial monitoring to establish pre-remedial reference concentrations for ATU byproducts began during the Second Quarter of 2014, pre-remedial concentrations of ATU byproducts in domestic and agricultural wells are still being obtained. Therefore, no domestic or agricultural wells were identified during the Third Quarter of 2014 as being actually affected.</p> <p>Nitrate and TDS data were evaluated at six monitoring wells (Table 6-4) located outside the hydraulic capture zones (shallow and deep) with at least 4 quarters of data from April 1, 2012 through March 31, 2014. Nitrate and TDS concentrations at all six wells exceeded either the MCL (10 mg/L) or SMCL</p>	NONE – Based on manual water level measurements from PG&E monitoring wells and the available screen information for the domestic and agricultural supply wells, there are no domestic or agricultural wells during the Third Quarter of 2014 water level data that meet the criteria for “actually affected wells”

TABLE 6-1

Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
 Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
<p>Third Quarter 2014 “Actually Affected Wells” (cont)</p>	<p>affected” monitoring wells under this EIR mitigation measure is currently being discussed with the Water Board, as per “Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California” (PG&E, 2014).⁵ Identification of actually affected domestic wells under this mitigation measure (if any) will be conducted upon Water Board approval of the methodology.</p>	<p>(500 mg/L), respectively, prior to the Second Quarter of 2014. During the Third Quarter of 2014, nitrate concentrations decreased from maximum concentrations for all six wells and TDS concentrations either decreased or did not exhibit increases exceeding 20% for five of the six wells.</p> <p>At one of the six wells, MW-85S, the TDS concentration of 2,700 mg/L increased 38 percent over the maximum TDS concentration of 1,960 mg/L (based on TDS data from April 1, 2012 through March 31, 2014 but did not exceed the maximum historical TDS concentration of 3,480 mg/L (Appendix E, Table E-1) at this well. Therefore, the increase in TDS at MW-85S is interpreted to be related to pre-existing TDS in the vicinity of this well rather than a result of ATU operations.</p> <p>The methodology for establishing pre-remedial reference values to aid in identifying “actually affected” monitoring wells under this EIR mitigation measure is currently being discussed with the Water Board (PG&E, 2014). Identification of actually affected monitoring wells under this mitigation measure (if any) will be conducted upon Water Board approval of the methodology.</p>	

⁵ Pacific Gas and Electric Company. 2014a. Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California. August 14.

TABLE 6-1
Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Third Quarter 2014 “Potentially Affected Wells”	NONE – A “potentially affected domestic well” is partially defined as a domestic supply well that has an increase in chromium concentrations due to remediation actions. The ATU WDRs do not specify what should be considered to be an “increase in chromium concentration” or what methods might be employed to make such a determination in the WTR-MM-2a domestic wells. Also, in the event that an increase in chromium concentration is identified, the ATU WDRs do not specify the methods to determine if the increase is due to remedial actions. Criteria and methodologies to make these determinations need to be developed. In the interim, for the current data set, a statistical evaluation of Cr(VI) trends was performed using data for all domestic wells in the WTR-MM-2a program with eight or more sample results between January 2011 and September 30, 2014. The trend analysis was conducted to identify domestic supply wells (if any) that might exhibit increasing chromium concentration trends. As summarized in this	NONE - “Actually affected monitoring wells” were not identified, so there are no potentially affected domestic or agricultural wells. As presented in the ROWD ⁶ , Addendum #3 ⁷ to the ROWD and the Addition to Addendum #3 ⁸ , modeling results indicate that there are no domestic or agricultural supply wells that would require mitigation within the first year of operation of the proposed ATUs.	Wells 23-27, 23-25, and 34-38 - Because drawdown of at least 10 feet is predicted to occur within 2 or 3 years of operation (based on computer modeling), baseline monitoring for arsenic, manganese, uranium, and gross alpha is proposed at three domestic supply wells (23-27, 23-25, and 34-38) during the first year of operation. Drawdown for these three wells did not exceed the trigger water level elevations during the Third Quarter of 2014.

⁶ ARCADIS 2014a. *Revised Report Of Waste Discharge for Proposed Agricultural Treatment Units, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California.* May 28.

⁷ ARCADIS. 2014b. *Agricultural Treatment Unit Report of Waste Discharge (ROWD) Addendum #3: Groundwater Modeling Evaluating Existing Nitrate and Total Dissolved Solids. Hinkley Compressor Station. Hinkley, California.* July 18.

⁸ ARCADIS. 2014c. *Addition to Agricultural Treatment Unit Report of Waste Discharge Addendum #3: Groundwater Modeling Evaluating Existing Nitrate and Total Dissolved Solids.* July 29.

TABLE 6-1

Summary of Environmental Impact Report Mitigation Measures for Supply Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

MITIGATION MEASURE	Chromium Plume Expansion	Agricultural Byproducts ¹	Aquifer Drawdown
	WTR-MM-2a	WTR-MM-2b	WTR-MM-2c
Third Quarter 2014 “Potentially Affected Wells” (cont)	report the non-parametric Mann-Kendall statistical trend analysis of 60 domestic wells in the WTR-MM-2a area did not indicate increasing trends at any of these wells. Therefore, no potentially affected wells were identified). No potentially affected domestic wells were identified based on annual computer modeling conducted during the Second Quarter of 2014 (ARCADIS, 2014a).		

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
01-01A	04/09/12		0.56	ND (1.0)
	07/17/12		0.59	ND (1.0)
	10/11/12		0.52	ND (1.0)
	01/17/13		0.5	ND (1.0)
	04/02/13		0.62	ND (1.0)
	04/11/13		0.55	ND (1.0)
	07/01/13		0.8	ND (1.0)
	10/01/13		0.49	ND (1.0)
	01/07/14		0.48	ND (1.0)
	04/01/14		0.58	ND (1.0)
	07/15/14		0.94	1.0
			Pre-remedial Reference Concentration ^a	NE
01-17	04/12/12		0.55	ND (1.0)
	07/13/12		0.56	ND (1.0)
	08/01/12		0.57	---
	10/02/12		0.63	ND (1.0)
	01/09/13		0.61	ND (1.0)
	04/03/13		0.64	ND (1.0)
	07/10/13		0.69	ND (1.0)
	01/14/14		0.61	ND (1.0)
	04/04/14		0.6	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
02-02A	05/09/12		0.59	ND (1.0)
	07/11/12		0.61	ND (1.0)
	10/02/12		0.47	ND (1.0)
	12/26/12		0.35	ND (1.0)
	01/08/13		0.34	ND (1.0)
	04/04/13		0.76	ND (1.0)
	07/02/13		0.51	ND (1.0)
	10/01/13		0.22	ND (1.0)
	01/07/14		0.86	1.2
	04/01/14		0.53	ND (1.0)
	07/14/14		0.45	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
02-02B	06/18/13		2.1	1.8
	07/02/13		2.0	1.8
	07/02/13		2.1	2.0
	01/07/14		ND (0.06)	ND (1.0)
	04/01/14		2.3	2.0
	07/14/14		2.1	2.3
	07/14/14	FD	2.2	2.3
		Pre-remedial Reference Concentration ^a	NE	NE
02-23	04/06/12		0.71	ND (1.0)
	07/19/12		0.39	ND (1.0)
	10/08/12		0.31	ND (1.0)
	11/19/12		0.69	ND (1.0)
	01/08/13		0.42	ND (1.0)
	04/02/13		0.72	ND (1.0)
	07/01/13		0.68	ND (1.0)
	10/01/13		0.69	ND (1.0)
	01/14/14		0.54	ND (1.0)
	04/01/14		0.7	ND (1.0)
	04/01/14	FD	0.69	ND (1.0)
	07/14/14		0.41	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
14-07	09/26/12		2.9	2.8
	10/08/12		2.8	2.7
	10/08/12	FD	2.8	2.6
		Pre-remedial Reference Concentration ^a	NE	NE
14-15	10/08/12		2.8	2.6
			Pre-remedial Reference Concentration ^a	NE
22-09	04/02/12		0.56	ND (1.0)
	05/22/12		1.4	1.3
	07/09/12		1.3	1.5
	10/03/12		1.2	1.8
	01/08/13		1.5	1.3
	01/08/13	FD	1.5	1.3
	04/09/13		1.4	1.4
	07/12/13		1.5	1.2
	10/10/13		0.72	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-103	07/09/12		2.2	2.0
	10/04/12		2.1	2.2
	01/25/13		2.1	2.2
	04/04/13		2.2	2.4
	07/02/13		2.2	2.0
	10/01/13		2.2	2.3
	01/07/14		2.2	2.0
	04/02/14		2.1	2.0
	07/07/14		2.0	1.9
		Pre-remedial Reference Concentration ^a	NE	NE
22-105	07/17/12		1.4	1.2
	10/03/12		1.1	1.3
		Pre-remedial Reference Concentration ^a	NE	NE
22-106	10/04/12		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-108	01/16/13		0.092	ND (1.0)
	07/02/13		ND (0.06)	ND (1.0)
	10/01/13		0.28	ND (1.0)
	01/08/14		0.23	ND (1.0)
	04/02/14		ND (0.06)	ND (1.0)
	07/07/14		0.15	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-15	04/03/12		1.2	ND (1.0)
	06/28/12		1.3	ND (1.0)
	07/09/12		1.4	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-23	07/17/12		1.3	1.2
	10/03/12		1.3	1.4
	01/16/13		1.4	1.4
	04/01/13		1.4	1.2
	07/02/13		1.4	1.4
	07/02/13	FD	1.5	1.3
	10/10/13		0.84	ND (1.0)
	07/09/14		1.4	1.5
			Pre-remedial Reference Concentration ^a	NE

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**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-30	04/04/12		2.3	2.2
	10/03/12		2.3	2.2
	11/07/12		2.4	2.3
	01/10/13		2.3	2.5
	04/04/13		2.4	2.5
	04/04/13	FD	2.3	2.5
	07/08/13		2.4	2.1
	10/02/13		2.3	2.5
	01/13/14		2.7	2.5
	04/04/14		2.3	2.3
	07/16/14		2.2	2.1
		Pre-remedial Reference Concentration ^a	NE	NE
22-39	04/11/12		ND (0.06)	ND (1.0)
	04/11/12	FD	ND (0.06)	ND (1.0)
	07/09/12		0.064	ND (1.0)
	07/09/12	FD	ND (0.06)	ND (1.0)
	10/02/12		ND (0.06)	ND (1.0)
	01/08/13		ND (0.06)	ND (1.0)
	04/01/13		ND (0.06)	ND (1.0)
	07/02/13		ND (0.06)	ND (1.0)
	07/02/13	FD	ND (0.06)	ND (1.0)
	10/02/13		ND (0.06)	ND (1.0)
	01/08/14		ND (0.06)	ND (1.0)
	04/02/14		ND (0.06)	ND (1.0)
	07/01/14		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-44	04/02/12		1.8	1.7
	07/10/12		1.9	1.6
	10/04/12		1.8	1.8
	01/18/13		1.9	1.8
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-48	04/09/12		1.6	1.4
	07/09/12		1.6	1.4
	07/09/12	FD	1.5	1.4
	10/03/12		1.5	1.5
	01/14/13		1.6	1.5
	04/02/13		1.6	1.4
	06/04/13		1.5	1.6
	07/03/13		1.6	1.4
	10/01/13		1.6	1.8
	01/08/14		1.5	1.6
	04/08/14		1.6	1.6
	07/14/14		1.5	1.5
	07/14/14	FD	1.4	1.5
		Pre-remedial Reference Concentration ^a	NE	NE
22-59	04/18/12		0.82	ND (1.0)
	10/03/12		0.86	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-60	04/12/12		0.15	ND (1.0)
	07/11/12		0.092	ND (1.0)
	10/18/12		0.15	ND (1.0)
	01/11/13		0.15	ND (1.0)
	04/03/13		0.29	ND (1.0)
	07/11/13		0.28	ND (1.0)
	10/10/13		0.13	ND (1.0)
	01/16/14		0.16	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-62	04/04/12		1.3	1.2
	06/14/12		1.3	1.1
	07/11/12		1.3	1.0
	07/11/12	FD	1.2	1.0
	10/08/12		1.3	1.1
	01/10/13		1.3	1.2
	04/04/13		1.3	1.3
	07/08/13		1.3	1.3
	10/04/13		1.2	1.2
	03/18/14		1.2	1.2
	04/07/14		1.3	1.2
	07/15/14		1.2	1.3
		Pre-remedial Reference Concentration ^a	NE	NE
22-67	04/04/13		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-69	06/06/12		0.27	ND (1.0)
	07/12/12		0.51	ND (1.0)
	10/03/12		0.57	ND (1.0)
	04/01/13		ND (0.06)	ND (1.0)
	07/08/13		ND (0.06)	ND (1.0)
	07/02/14		0.16	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
22-70	06/13/12		1.7	1.6
	07/10/12		0.99	ND (1.0)
	10/03/12		1.1	1.1
	01/07/13		0.95	ND (1.0)
	04/01/13		1.2	1.0
	07/02/13		1.9	1.8
	10/01/13		0.36	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-74	04/04/12		2.1	2.0
	07/09/12		2.1	1.9
	10/03/12		2.1	2.2
	10/18/12		2.1	2.1
	01/08/13		2.1	2.1
	04/02/13		2.0	1.7
	07/03/13		2.0	1.7
	10/01/13		2.0	1.9
	01/06/14		1.8	1.8
		Pre-remedial Reference Concentration ^a	NE	NE
22-75	04/04/12		1.8	1.7
	07/09/12		1.7	1.4
	09/26/12		1.8	1.6
	09/26/12	FD	1.8	1.8
	10/03/12		1.7	1.6
	01/09/13		1.8	1.7
	04/08/13		1.7	1.7
	07/03/13		1.7	1.5
	10/01/13		1.8	1.8
	01/13/14		1.6	1.6
	04/04/14		1.7	1.7
	07/16/14		1.7	1.6
	07/16/14	FD	1.8	1.8
		Pre-remedial Reference Concentration ^a	NE	NE
22-78	04/11/12		0.45	ND (1.0)
	04/03/13		0.14	ND (1.0)
	04/02/14		0.54	ND (1.0)
	04/02/14	FD	0.47	1.1
		Pre-remedial Reference Concentration ^a	NE	NE
22-79	01/14/13		1.3	1.3
	04/01/13		0.55	ND (1.0)
	01/10/14		1.2	1.3
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
22-81	04/11/12		1.4	1.4
	07/11/12		1.7	1.5
	10/03/12		1.6	1.7
	10/18/12		1.3	1.4
	01/15/13		1.1	1.1
	04/01/13		1.5	1.4
	07/08/13		1.8	1.6
	10/01/13		1.4	1.4
	01/07/14		0.77	ND (1.0)
	04/02/14		1.4	1.3
	07/14/14		1.3	1.4
		Pre-remedial Reference Concentration ^a	NE	NE
22-82	04/11/12		0.18	ND (1.0)
	07/19/12		0.52	ND (1.0)
	10/18/12		0.1	ND (1.0)
	12/04/12		0.36	ND (1.0)
	01/15/13		ND (0.06)	ND (1.0)
	04/01/13		0.35	ND (1.0)
	04/01/13	FD	0.33	ND (1.0)
	07/03/13		0.56	ND (1.0)
	10/01/13		0.64	ND (1.0)
	01/07/14		0.091	ND (1.0)
	04/02/14		0.12	ND (1.0)
	07/14/14		0.51	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
23-07	04/13/12		2.0	1.7
	07/13/12		1.9	1.6
	10/16/12		1.0	1.9
	03/12/13		1.9	2.3
	01/24/14		1.6	1.8
	04/04/14		2.1	3.0
	07/11/14		2.0	2.4
		Pre-remedial Reference Concentration ^a	NE	NE

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
23-24	04/20/12		1.5	1.2
	07/10/12		ND (0.3)	ND (1.0)
	10/01/12		1.0	1.4
	01/08/13		ND (0.06)	1.5
	07/01/13		0.38	ND (1.0)
	10/08/13		0.39	1.0
	10/08/13	FD	0.43	1.0
	04/07/14		0.35	ND (1.0)
	07/07/14		0.34	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
23-25	05/16/12		2.1	2.3
	07/10/12		2.2	2.5
	10/01/12		2.1	2.8
	01/09/13		1.3	2.1
	04/03/14		1.5	2.4
	07/21/14		2.7	2.9
		Pre-remedial Reference Concentration ^a	NE	NE
23-27	04/30/12		0.2	ND (1.0)
	07/10/12		0.069	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
23-28	04/30/12		2.1	1.8
	08/09/12		2.1	1.6
	08/09/12	FD	2.1	1.6
	01/11/13		1.3	1.0
	10/03/13		2.0	1.8
	01/16/14		1.4	1.4
	04/04/14		2.1	2.0
	07/10/14		1.8	1.7
	07/10/14	FD	1.9	1.8
		Pre-remedial Reference Concentration ^a	NE	NE

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**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
24-03	04/11/12		2.5	2.3
	07/19/12		2.7	2.6
	10/01/12		2.5	2.8
	01/09/13		2.2	2.3
	04/04/13		0.41	ND (1.0)
	01/09/14		1.4	1.8
	01/09/14	FD	1.3	1.8
	04/04/14		1.4	1.7
		Pre-remedial Reference Concentration ^a	NE	NE
25-14	05/09/12		0.37	ND (1.0)
	09/05/12		1.6	1.5
	10/01/12		1.0	ND (1.0)
	01/08/13		0.092	ND (1.0)
	04/04/13		0.83	ND (1.0)
	07/09/13		0.25	ND (1.0)
	10/02/13		1.4	1.4
	01/07/14		ND (0.06)	ND (1.0)
	04/04/14		0.13	ND (1.0)
	07/01/14		0.39	1.0
		Pre-remedial Reference Concentration ^a	NE	NE
25-16	05/09/12		2.3	2.3
	07/17/12		2.3	2.3
	10/05/12		2.2	2.1
	07/16/13		2.3	2.2
	06/02/14		2.3	2.2
	07/07/14		2.2	2.5
			Pre-remedial Reference Concentration ^a	NE
25-18	05/16/12		2.0	1.9
	10/19/12		2.2	3.1
	04/10/13		1.9	1.9
			Pre-remedial Reference Concentration ^a	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
27-08	04/16/12		1.3	1.1
	05/16/12		1.4	1.3
	06/14/12		1.5	1.3
	07/12/12		1.4	1.2
	08/09/12		1.7	1.1
	09/06/12		1.6	1.4
	10/02/12		1.4	1.4
	11/08/12		1.2	1.2
	12/04/12		1.1	1.2
	01/08/13		0.8	ND (1.0)
	02/20/13		1.0	ND (1.0)
	03/12/13		1.3	1.7
	04/02/13		1.5	1.2
	04/02/13	FD	1.5	1.3
			Pre-remedial Reference Concentration ^a	NE
27-16	04/12/12		1.4	1.2
	07/10/12		1.3	1.2
	10/08/12		1.3	1.2
	01/10/13		1.4	1.3
	04/02/13		1.4	1.2
	07/03/13		1.2	1.1
	10/03/13		1.2	1.0
	10/03/13	FD	1.2	1.1
	01/09/14		1.3	1.3
	04/02/14		1.4	1.2
	07/09/14		1.2	1.2
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
27-26	05/09/12		1.7	1.7
	05/09/12	FD	1.8	1.7
	07/11/12		1.6	1.5
	10/04/12		1.7	1.7
	01/09/13		1.7	1.5
	04/04/13		1.8	1.8
	07/09/13		1.7	1.5
	10/08/13		1.7	1.8
	01/09/14		1.7	1.6
	04/02/14		1.7	1.6
	07/02/14		1.6	1.6
	07/02/14	FD	1.6	1.5
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
27-38	04/16/12		0.72	ND (1.0)
	04/16/12	FD	0.73	ND (1.0)
	05/16/12		0.91	1.2
	06/14/12		1.5	1.4
	07/12/12		1.4	1.4
	08/09/12		1.7	1.3
	09/06/12		1.7	1.4
	10/02/12		1.5	1.5
	11/08/12		1.3	1.4
	12/04/12		0.72	ND (1.0)
	01/08/13		0.49	1.1
	02/20/13		0.61	ND (1.0)
	03/12/13		0.31	ND (1.0)
	04/02/13		1.4	1.3
	05/07/13		1.3	1.4
	06/04/13		1.4	1.4
	07/02/13		1.5	1.4
	08/01/13		1.6	1.8
	09/13/13		1.4	1.5
	10/01/13		1.7	1.6
	11/07/13		0.78	ND (1.0)
	12/10/13		0.11	ND (1.0)
	12/10/13	FD	0.088	ND (1.0)
	01/07/14		0.27	ND (1.0)
	02/05/14		1.2	1.4
	03/19/14		1.4	2.0
	04/03/14		1.2	1.4
	04/03/14	FD	1.2	1.3
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
27-39	04/16/12		0.62	ND (1.0)
	05/16/12		1.1	1.2
	06/14/12		1.3	1.3
	07/12/12		1.5	1.5
	08/09/12		1.7	1.2
	09/06/12		1.3	1.3
	10/02/12		1.2	1.4
	11/08/12		0.12	ND (1.0)
	12/04/12		0.24	ND (1.0)
	01/08/13		0.54	ND (1.0)
	02/20/13		ND (0.06)	ND (1.0)
	03/12/13		1.2	1.8
	04/02/13		1.4	1.3
	05/07/13		2.0	2.3
	06/04/13		1.8	1.6
	07/02/13		1.6	1.4
	08/01/13		2.2	2.4
	09/13/13		2.0	1.9
	10/01/13		1.9	2.0
	11/07/13		1.7	1.5
	12/10/13		0.53	ND (1.0)
	01/07/14		0.26	ND (1.0)
	02/05/14		0.41	1.0
	03/19/14		1.4J	1.9
	03/19/14	FD	1.9J	1.9
	04/03/14		1.9	1.9
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
27-40	04/16/12		1.9	1.7
	05/16/12		1.9	1.7
	06/14/12		2.0	1.8
	07/12/12		1.9	1.7
	08/09/12		2.1	1.5
	09/06/12		2.1	1.8
	10/02/12		2.0	1.9
	11/08/12		2.0	2.0
	12/04/12		1.9	2.1
	01/08/13		2.0	1.9
	02/20/13		2.0	1.6
	03/12/13		2.0	2.2
	04/02/13		2.0	1.7
	05/07/13		2.0	1.9
	06/04/13		1.9	1.4
	07/02/13		1.9	1.8
	08/01/13		2.2	2.0
	09/13/13		1.9	1.8
	10/01/13		2.0	2.0
	11/07/13		1.9	1.6
12/10/13		1.5	1.4	
01/07/14		1.7	1.6	
01/07/14	FD	1.7	1.6	
02/05/14		2.0	1.9	
03/19/14		2.0	1.4	
04/03/14		1.9	1.8	
		Pre-remedial Reference Concentration ^a	NE	NE
27-42	04/04/12		0.46	ND (1.0)
	07/10/12		0.53	ND (1.0)
	10/03/12		0.55	ND (1.0)
	01/17/13		0.43	ND (1.0)
	04/02/13		0.22	ND (1.0)
	07/03/13		0.072	ND (1.0)
	10/02/13		0.24	ND (1.0)
	10/02/13	FD	0.24	ND (1.0)
	01/06/14		0.4	ND (1.0)
	04/09/14		0.47	ND (1.0)
07/02/14		0.24	ND (1.0)	
		Pre-remedial Reference Concentration ^a	NE	NE

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	
			µg/L	µg/L	
			California MCL ^b	50	
			Federal MCL ^c	100	
			Background ^d	3.2	
27-43	04/04/12		1.3	1.2	
	07/10/12		1.3	1.2	
	09/26/12		1.5	1.3	
	10/03/12		1.4	1.4	
	04/02/13		1.4	1.2	
	04/02/13	FD	1.4	1.2	
	07/03/13		1.4	1.2	
	10/02/13		1.4	1.5	
	01/06/14		1.4	1.3	
	04/09/14		1.5	2.3	
	07/15/14		1.4	1.4	
			Pre-remedial Reference Concentration ^a	NE	NE
	27-48	05/09/12		0.68	ND (1.0)
07/10/12			0.59	ND (1.0)	
07/10/12		FD	0.61	ND (1.0)	
10/04/12			0.56	ND (1.0)	
01/09/13			0.58	ND (1.0)	
04/03/13			0.67	ND (1.0)	
07/02/13			0.68	ND (1.0)	
10/03/13			0.66	ND (1.0)	
01/09/14			0.28	ND (1.0)	
04/02/14			0.61	ND (1.0)	
07/02/14			0.52	ND (1.0)	
			Pre-remedial Reference Concentration ^a	NE	NE
27-49		05/09/12		1.5	1.5
	07/10/12		1.2	1.2	
	10/04/12		1.2	1.3	
	01/09/13		0.25	ND (1.0)	
	04/03/13		1.8	1.8	
	07/02/13		1.7	1.7	
	10/03/13		1.8	1.6	
	01/09/14		1.9	1.8	
	04/02/14		2.0	1.8	
	07/02/14		1.6	1.7	
			Pre-remedial Reference Concentration ^a	NE	NE
	28-05	10/15/12		ND (0.06)	ND (1.0)
		10/15/12	FD	ND (0.06)	ND (1.0)
			Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
28-06	04/12/12		0.27	ND (1.0)
	07/13/12		1.0	1.1
	10/12/12		0.96	1.5
	01/09/13		0.55	ND (1.0)
	04/04/13		0.68	ND (1.0)
	04/04/13	FD	0.69	ND (1.0)
	07/09/13		0.07	ND (1.0)
	01/13/14		0.4	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-08	04/11/12		2.5	2.0
	04/11/12	FD	2.5	2.0
	07/10/12		2.3	1.8
	10/04/12		2.3	2.1
	10/04/12	FD	2.3	2.2
	01/18/13		2.2	2.1
	07/11/13		2.3	2.0
	07/11/13	FD	2.4	2.0
	10/03/13		2.5	2.6
		Pre-remedial Reference Concentration ^a	NE	NE
28-09	04/11/12		1.5	1.5
	07/12/12		2.1	2.0
	09/27/12		2.0	2.0
	12/26/12		1.9	2.3
	12/26/12		1.9	1.8
	03/12/13		2.0	2.5
	04/09/13		3.1	3.0
	07/09/13		2.3	2.0
	10/03/13		1.1	1.3
	10/03/13	FD	1.3	1.4
	01/14/14		2.2	2.2
	04/02/14		2.2	2.0
	07/14/14		2.1	2.0
	07/14/14	FD	2.1	2.0
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
28-16	04/02/12		ND (0.06)	ND (1.0)
	07/16/12		ND (0.06)	ND (1.0)
	09/06/12		0.92	1.0
	10/02/12		0.37	ND (1.0)
	01/09/13		0.3	ND (1.0)
	01/09/13	FD	ND (0.06)	ND (1.0)
	04/02/13		0.23	ND (1.0)
	07/10/13		0.57	ND (1.0)
	10/02/13		0.45	ND (1.0)
	01/09/14		0.23	ND (1.0)
	04/03/14		0.13	ND (1.0)
	04/03/14	FD	0.12	ND (1.0)
	07/02/14		0.8	1.2
			Pre-remedial Reference Concentration ^a	NE
28-17	05/09/12		0.59	ND (1.0)
	07/10/12		0.56	ND (1.0)
	10/01/12		0.57	ND (1.0)
	01/15/13		0.57	1.1
	04/03/13		0.47	ND (1.0)
	07/08/13		0.6	ND (1.0)
	10/03/13		0.45	ND (1.0)
	01/09/14		0.64	ND (1.0)
	01/09/14	FD	0.66	ND (1.0)
	04/02/14		0.62	ND (1.0)
	07/02/14		0.44	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-19	06/13/12		ND (0.06)	ND (1.0)
	10/04/12		ND (0.06)	ND (1.0)
	07/09/13		ND (0.06)	ND (1.0)
	10/10/13		ND (0.06)	ND (1.0)
	05/08/14		ND (0.06)	ND (1.0)
			Pre-remedial Reference Concentration ^a	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
28-20	04/24/12		1.2	1.0
	05/22/12		1.1	1.4
	07/18/12		0.48	ND (1.0)
	10/08/12		1.2	1.1
	01/10/13		1.2	1.1
	04/10/13		1.3	1.3
	07/03/13		1.3	1.1
	10/03/13		1.2	1.3
	01/06/14		1.2	1.2
	04/02/14		1.2	1.2
	07/15/14		0.74	1.0
		Pre-remedial Reference Concentration ^a	NE	NE
28-21	04/11/12		0.53	ND (1.0)
	06/28/12		2.6	2.1
	07/18/12		1.8	1.6
	07/18/12	FD	1.8	1.7
	10/01/12		2.5	2.5
	01/07/13		8.6	8.0
	04/10/13		6.1	5.6
	07/01/13		4.0	3.4
	01/14/14		0.74	ND (1.0)
	04/09/14		1.8	1.8
	07/10/14		3.1	2.9
		Pre-remedial Reference Concentration ^a	NE	NE
28-25	04/05/12		2.0	1.9
	07/13/12		2.1	2.0
	10/02/12		2.0	2.0
	01/07/13		2.0	1.8
	04/08/13		2.0	2.0
	04/08/13	FD	2.0	1.9
	07/01/13		2.0	1.8
	10/04/13		1.9	2.0
	01/07/14		2.0	1.9
	04/03/14		2.0	2.0
	07/01/14		1.8	1.9
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
28-28	05/09/12		0.63	1.0
	07/10/12		0.96	ND (1.0)
	10/01/12		1.1	1.2
	01/15/13		0.89	1.1
	04/03/13		0.59	ND (1.0)
	07/08/13		0.79	ND (1.0)
	10/03/13		0.89	1.0
	10/03/13	FD	0.89	1.0
	01/09/14		1.2	1.1
	04/02/14		0.95	1.0
		Pre-remedial Reference Concentration ^a	NE	NE
28-36	04/25/12		0.65	2.5
	07/10/12		2.3	2.7
	09/27/12		0.89	2.6
	10/04/12		1.7	2.9
	01/09/13		0.24	2.2
	04/04/13		2.1	3.2
	07/01/13		1.7	2.8
	10/03/13		2.1	2.8
	01/14/14		0.8	2.3
	04/02/14		0.99	2.4
	04/02/14	FD	0.96	2.4
	07/15/14		1.2	2.7
		Pre-remedial Reference Concentration ^a	NE	NE
28-40	04/05/12		1.2	1.0
	07/10/12		1.0	ND (1.0)
	10/02/12		1.2	1.1
	10/02/12	FD	1.3	1.2
	01/07/13		1.2	1.1
	04/02/13		1.3	1.1
	07/01/13		1.1	ND (1.0)
	10/04/13		1.2	1.1
	10/04/13	FD	1.1	1.1
	01/07/14		1.2	1.2
	04/02/14		1.2	1.1
	07/01/14		1.1	1.2
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L
		California MCL ^b	10	50
		Federal MCL ^c	NE	100
		Background ^d	3.1	3.2
28-42	05/10/12		1.1	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-51	03/13/13		0.13	ND (1.0)
	05/08/13		ND (0.06)	ND (1.0)
	07/03/13		0.064	ND (1.0)
	10/03/13		0.28	ND (1.0)
	01/13/14		ND (0.06)	ND (1.0)
	04/04/14		ND (0.06)	ND (1.0)
	07/10/14		0.098	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-62	01/09/13		0.11	ND (1.0)
	04/10/13		0.25	ND (1.0)
	07/08/13		ND (0.06)	ND (1.0)
	10/03/13		0.35	ND (1.0)
	01/15/14		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-75	10/11/12		0.32	ND (1.0)
	01/10/13		1.5	1.6
	04/04/13		1.7	1.8
	07/10/13		1.3	1.1
		Pre-remedial Reference Concentration ^a	NE	NE
28-76	10/09/12		0.91	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
28-78	03/11/13		1.5	1.4
	07/15/13		1.5	1.4
	10/15/13		1.5	1.2
	01/16/14		1.5	1.3
	04/11/14		1.6	1.5
	07/10/14		1.4	1.4
	07/10/14	FD	1.5	1.4
		Pre-remedial Reference Concentration ^a	NE	NE
28-81	03/05/13		1.6	1.7
	05/08/13		1.6	1.6
	07/18/13		2.2	2.0
	07/18/13	FD	2.2	2.0
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	
			µg/L	µg/L	
			California MCL ^b	50	
			Federal MCL ^c	100	
			Background ^d	3.2	
28-82	03/05/13		1.6	1.3	
	04/08/13		1.7	1.5	
	07/01/13		1.6	1.3	
	10/07/13		1.8	1.7	
		Pre-remedial Reference Concentration ^a	NE	NE	
30E-01	04/03/12		1.7	1.6	
	07/12/12		1.6	1.7	
	09/05/12		1.6	1.5	
	10/02/12		1.7	1.6	
	01/09/13		2.0	1.5	
	01/09/13	FD	2.0	1.5	
	04/02/13		1.6	1.3	
	07/08/13		1.8	1.6	
	10/02/13		1.3	1.3	
	01/10/14		1.7	1.7	
	01/10/14	FD	1.7	1.7	
	04/02/14		1.5	1.3	
	07/08/14		1.8	1.8	
		Pre-remedial Reference Concentration ^a	NE	NE	
34-06	05/09/12		ND (0.06)	ND (1.0)	
	07/16/12		ND (0.06)	ND (1.0)	
	10/03/12		ND (0.06)	ND (1.0)	
	10/03/12	FD	ND (0.06)	ND (1.0)	
	01/16/13		ND (0.06)	ND (1.0)	
	04/01/13		ND (0.06)	ND (1.0)	
	07/12/13		ND (0.06)	ND (1.0)	
	10/04/13		ND (0.06)	ND (1.0)	
	01/09/14		ND (0.06)	ND (1.0)	
	04/04/14		ND (0.06)	ND (1.0)	
	07/17/14		ND (0.06)	ND (1.0)	
			Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
34-38	05/02/12		ND (0.06)	ND (1.0)
	07/12/12		ND (0.06)	ND (1.0)
	10/05/12		ND (0.06)	ND (1.0)
	01/11/13		ND (0.06)	ND (1.0)
	04/03/13		ND (0.06)	ND (1.0)
	07/03/13		ND (0.06)	ND (1.0)
	01/13/14		ND (0.06)	ND (1.0)
	01/13/14	FD	ND (0.06)	ND (1.0)
	04/16/14		ND (0.06)	ND (1.0)
	07/16/14		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
34-50	08/23/12		1.0	ND (1.0)
	11/12/12		0.96	ND (1.0)
	01/11/13		0.97	ND (1.0)
	04/01/13		1.0	ND (1.0)
	07/10/13		0.99	ND (1.0)
	10/04/13		0.93	ND (1.0)
	01/15/14		1.0	1.0
	04/04/14		0.87	ND (1.0)
	07/14/14		0.97	1.0
	07/14/14	FD	0.96	ND (1.0)
07/16/14		---	---	
07/16/14	FD	---	---	
		Pre-remedial Reference Concentration ^a	NE	NE
34-58	05/02/12		ND (0.06)	ND (1.0)
	07/11/12		0.1	ND (1.0)
	12/11/12		ND (0.06)	ND (1.0)
	03/13/13		ND (0.06)	ND (1.0)
	04/10/13		ND (0.06)	ND (1.0)
	10/11/13		ND (0.06)	ND (1.0)
	01/09/14		ND (0.06)	ND (1.0)
	07/09/14		0.22	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
34-63	12/07/12		ND (0.06)	ND (1.0)
	01/08/13		0.14	ND (1.0)
	04/03/13		0.3	ND (1.0)
	07/02/13		ND (0.06)	ND (1.0)
	10/02/13		1.3	1.4
	01/15/14		0.84	ND (1.0)
	04/10/14		0.25	ND (1.0)
	07/08/14		0.36	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE
34-77	04/05/12		0.62	ND (1.0)
	07/16/12		1.1	ND (1.0)
	10/05/12		1.0	1.1
	01/09/13		0.74	ND (1.0)
	04/04/13		1.2	1.2
	07/10/13		1.2	ND (1.0)
	10/04/13		1.1	1.1
	10/04/13	FD	1.1	1.1
	01/07/14		0.99	1.1
	04/01/14		1.2	1.1
07/08/14		1.1	1.1	
		Pre-remedial Reference Concentration ^a	NE	NE
36-17	05/09/12		1.0	ND (1.0)
	07/16/12		0.92	ND (1.0)
	10/02/12		1.0	1.0
	01/07/13		0.86	ND (1.0)
	04/02/13		0.89	ND (1.0)
	07/01/13		1.1	ND (1.0)
	10/02/13		1.1	1.0
	01/14/14		0.87	ND (1.0)
	04/01/14		0.96	ND (1.0)
07/02/14		1.1	1.1	
		Pre-remedial Reference Concentration ^a	NE	NE

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	
			µg/L	µg/L	
			California MCL ^b	50	
			Federal MCL ^c	100	
			Background ^d	3.2	
36-26	04/04/12		1.6	1.7	
	07/16/12		1.2	1.7	
	10/04/12		1.7	1.8	
	01/16/13		1.6	1.8	
	04/10/13		2.1	2.2	
	07/02/13		2.1	2.2	
	10/01/13		1.2	2.0	
	01/15/14		1.7	2.0	
	04/03/14		1.5	1.8	
	04/03/14	FD	1.4	1.8	
	07/02/14		1.9	1.9	
			Pre-remedial Reference Concentration ^a	NE	NE
	36-31	07/09/12		1.9	1.6
10/18/12			1.9	1.8	
01/17/13			1.6	1.8	
01/17/13		FD	1.7	1.9	
04/02/13			1.5	1.3	
07/02/13			1.5	1.5	
10/02/13			1.5	1.6	
10/02/13			1.3	1.6	
04/01/14			1.4	1.4	
07/10/14			1.3	1.4	
			Pre-remedial Reference Concentration ^a	NE	NE
36-41	04/04/12		1.1	ND (1.0)	
	04/04/12	FD	1.1	1.1	
	07/13/12		0.94	ND (1.0)	
	10/08/12		1.2	1.1	
	01/14/13		0.63	ND (1.0)	
	04/02/13		1.4	1.1	
	07/02/13		0.64	ND (1.0)	
	10/03/13		0.88	ND (1.0)	
	01/15/14		1.5	1.4	
	04/01/14		1.4	1.3	
	07/09/14		1.5	1.5	
		Pre-remedial Reference Concentration ^a	NE	NE	

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
36-43	05/09/12		0.62	ND (1.0)
	07/16/12		0.56	ND (1.0)
	07/16/12	FD	0.5	ND (1.0)
	10/02/12		0.6	ND (1.0)
	01/07/13		0.39	ND (1.0)
	04/02/13		0.52	ND (1.0)
	07/01/13		0.52	ND (1.0)
	10/02/13		0.58	ND (1.0)
	10/02/13	FD	0.54	ND (1.0)
	03/07/14		0.55	ND (1.0)
	04/01/14		0.55	ND (1.0)
	07/02/14		0.53	ND (1.0)
			Pre-remedial Reference Concentration ^a	NE
BGS-25	04/06/12		1.5	1.5
	07/19/12		1.5	1.4
	07/19/12	FD	1.5	1.4
	10/18/12		1.5	1.4
	01/09/13		1.2	1.2
	04/04/13		1.1	1.3
	04/04/13	FD	1.1	1.3
	07/11/13		1.8	1.5
	10/04/13		1.7	1.7
	01/09/14		1.5	1.6
	04/04/14		1.9	1.8
	07/10/14		2.0	1.9
		Pre-remedial Reference Concentration ^a	NE	NE
BGS-27	05/09/12		0.86	ND (1.0)
	07/16/12		0.48	ND (1.0)
	10/02/12		0.92	ND (1.0)
	01/09/13		1.1	1.0
	04/02/13		1.1	1.0
	07/01/13		1.1	1.0
	07/01/13	FD	1.1	1.1
	10/02/13		1.3	1.3
	01/10/14		1.2	ND (1.0)
	04/01/14		0.94	1.0
	07/02/14		0.92	ND (1.0)
			Pre-remedial Reference Concentration ^a	NE

Table 6-2

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium
			µg/L	µg/L
			California MCL ^b	50
			Federal MCL ^c	100
			Background ^d	3.2
BGS-46	04/03/12		1.8	1.7
	04/03/12	FD	1.8	1.7
	07/17/12		1.8	1.9
	10/02/12		1.6	1.6
	10/02/12	FD	1.7	1.7
	01/08/13		1.7	1.6
	04/04/13		1.6	1.7
	07/09/13		1.7	1.4
	10/02/13		1.5	1.4
	01/09/14		1.2	1.1
	04/04/14		0.74	ND (1.0)
	04/04/14	FD	0.74	1.0
	07/09/14		1.2	1.2
		Pre-remedial Reference Concentration ^a	NE	NE
BGS-48	04/03/12		0.21	ND (1.0)
	07/12/12		0.13	ND (1.0)
	10/02/12		0.5	ND (1.0)
	01/09/13		0.18	ND (1.0)
	01/09/13	FD	0.37	ND (1.0)
	04/02/13		0.087	ND (1.0)
	05/06/13		0.23	ND (1.0)
	07/08/13		0.13	ND (1.0)
	10/02/13		0.082	ND (1.0)
	01/10/14		0.071	ND (1.0)
	04/02/14		0.062	ND (1.0)
	07/08/14		ND (0.06)	ND (1.0)
		Pre-remedial Reference Concentration ^a	NE	NE

**Analytical Results for Chromium in Domestic Wells from April 1, 2012 through Current Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Notes:

^a The methodology for establishing pre-remedial reference values is currently being discussed with Water Board, as per "Implementation of Mitigation Measures WTR-MM-2a and WTR-MM-2b, Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California" (PG&E, 2014). In addition, the methodology for implementation of mitigation measures WTR-MM-2a and WTR-MM-2b are subject to a pending petition, "In the Matter of Lahontan Regional Water Quality Control Board Resolution No. R6V-2013-0060 Certifying a Final Environmental Impact Report." Petition ID A-2266: Petition for Review; Request to Hold Petition in Abeyance. Pacific Gas and Electric Company, Petitioner (PG&E, 2013).

^b California Department of Public Health MCL (<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chromium6.aspx>).

^c Federal MCL from United States Environmental Protection Agency (<http://water.epa.gov/drink/contaminants/basicinformation/chromium.cfm>).

^d Background: Background concentration developed during 2007 Background Study (CH2M HILL, 2007). Background concentrations of chromium are currently being re-evaluated by the United States Geological Survey.

-- = not analyzed

µg/L = micrograms per liter

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

ND (x.x) = not detected at the reporting limit shown

NE = not established

Table 6-3

Analytical Results for Agricultural Byproducts in Domestic and Agricultural Wells, Third Quarter 2014
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
		California MCL ^a	10	500	15	50	20
		Federal MCL ^b	10	500	15	50	20
22-103	07/07/14		1.90	550	15.5J	ND (4.00)	9.40
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-108	07/07/14		9.70	2,300	26.3J	4.18	29.0
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-30	07/16/14		3.40	470	7.31	4.01	7.50
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-39	07/01/14		11.0	2,400	19.9	4.04	30.0
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-62	07/15/14		2.40	730	7.48J	ND (4.00)	6.00
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-69	07/02/14		3.00	700	8.26	ND (4.00)	8.10
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-75	07/16/14		3.70	700	5.59J	ND (4.00)	7.30
	07/16/14	FD	3.60	700	8.75	ND (4.00)	7.50
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-81	07/14/14		3.90	430	7.30J	ND (4.00)	7.60
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
22-82	07/14/14		11.0	650	16.3J	ND (4.00)	8.60
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
23-24	07/07/14		1.80	370	4.40J	ND (4.00)	2.90
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
23-25	07/21/14		14.0	1,400	62.5	ND (4.00)	48.0
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
23-28	07/10/14		3.80	340J	12.5J	ND (4.00)	8.50
	07/10/14	FD	3.90	460J	11.4J	ND (4.00)	8.70
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
25-14	07/01/14		3.40	570	11.0	ND (4.00)	8.50
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
27-26	07/02/14		6.60	480	26.7	4.11	5.90
	07/02/14	FD	6.70	500	26.8	4.51	5.90
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
27-43	07/15/14		6.60	540	18.9J	4.68	11.0
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE
34-06	07/17/14		ND (0.05)	300	ND (3.00)	ND (4.00)	ND (0.67)
	Pre-remedial Reference Concentration ^c		NE	NE	NE	NE	NE

Table 6-3

Analytical Results for Agricultural Byproducts in Domestic and Agricultural Wells, Third Quarter 2014
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
		California MCL ^a	10	500	15	50	20
		Federal MCL ^b	10	500	15	50	20
34-38	07/16/14		0.16	270	ND (3.00)	ND (4.00)	ND (0.67)
		Pre-remedial Reference Concentration ^c	NE	NE	NE	NE	NE
34-50	07/16/14		0.40	310	5.11	ND (4.00)	4.80
	07/16/14	FD	0.39	330	7.60	ND (4.00)	5.00
		Pre-remedial Reference Concentration ^c	NE	NE	NE	NE	NE
34-58	07/09/14		0.16	300	ND (3.00)	ND (4.00)	0.72
		Pre-remedial Reference Concentration ^c	NE	NE	NE	NE	NE
36-31	07/10/14		15.0	840	19.4J	5.32	19.0
		Pre-remedial Reference Concentration ^c	NE	NE	NE	NE	NE
36-41	07/09/14		13.0	1,000	40.2	4.31	29.0
		Pre-remedial Reference Concentration ^c	NE	NE	NE	NE	NE

Notes:

- ^a The California Department of Health primary MCLs are for nitrate as nitrogen, gross alpha, gross beta and dissolved uranium. A secondary MCL is listed for TDS.
- ^b The United States Environmental Protection Agency primary MCLs are for nitrate as nitrogen, gross alpha, gross beta and dissolved uranium. A secondary MCL is listed for TDS. The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.
- ^c A minimum of four quarters of data are needed to establish pre-remedial reference concentrations. Because initial monitoring to establish pre-remedial reference concentrations for ATU byproducts started during the Second Quarter of 2014, pre-remedial concentrations are still being obtained.

J = concentration is estimated based on review of quality control criteria and data validation

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

ND (x.x) = not detected at the reporting limit shown

NE = not established

pCi/L = picocuries per liter

TDS = total dissolved solids

TABLE 6-4

Non Parametric (Mann-Kendall) Trend Analysis of Hexavalent Chromium Trends in WTR-MM-2a Domestic Supply Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well	Number of Detections	Number of Non-Detects	Total Number of Samples	Detect Frequency	Min (µg/L)	Max (µg/L)	Mean (µg/L)	Median (µg/L)	Trend	Stability	Last Result	Last Sample Date
01-01A	14	0	14	100	0.470	0.940	0.588	0.545	No Trend	Stable	0.940	Jul-14
02-02A	15	0	15	100	0.220	0.860	0.498	0.470	No Trend	Stable	0.450	Jul-14
02-23	14	0	14	100	0.160	0.840	0.571	0.675	No Trend	Stable	0.410	Jul-14
22-09	9	1	10	90	0.010	1.50	0.963	1.01	No Trend	Stable	0.720	Oct-13
22-103	9	0	9	100	2.00	2.20	2.14	2.20	No Trend	Stable	2.00	Jul-14
22-30	14	0	14	100	2.20	2.70	2.38	2.35	No Trend	Stable	2.20	Jul-14
22-39	2	14	16	13	0.010	0.140	0.022	0.010	>50% ND	NA	0.010	Jul-14
22-48	13	0	13	100	1.50	1.60	1.57	1.60	No Trend	Stable	1.50	Jul-14
22-60	12	1	13	92	0.010	0.340	0.182	0.150	No Trend	Stable	0.160	Jan-14
22-62	13	0	13	100	1.20	1.40	1.28	1.30	No Trend	Stable	1.20	Jul-14
22-69	5	3	8	63	0.010	0.570	0.251	0.215	No Trend	Stable	0.160	Jul-14
22-70	8	0	8	100	0.360	1.90	1.14	1.05	No Trend	Stable	0.360	Oct-13
22-74	12	0	12	100	1.80	2.20	2.07	2.10	Decreasing	NA	1.80	Jan-14
22-75	14	0	14	100	1.60	1.80	1.74	1.75	Decreasing	NA	1.70	Jul-14
22-81	12	0	12	100	0.770	1.80	1.38	1.40	No Trend	Stable	1.30	Jul-14
22-82	11	1	12	92	0.010	0.640	0.285	0.210	No Trend	Stable	0.510	Jul-14
23-07	14	0	14	100	1.00	2.50	1.88	1.90	No Trend	Stable	2.00	Jul-14
23-24	11	3	14	79	0.010	2.60	1.09	0.695	Decreasing	NA	0.340	Jul-14
23-27	3	5	8	38	0.010	0.200	0.051	0.010	>50% ND	NA	0.069	Jul-12
23-28	12	0	12	100	0.530	2.10	1.76	1.95	No Trend	Stable	1.80	Jul-14
24-03	12	0	12	100	0.410	2.80	2.21	2.55	Decreasing	NA	1.40	Apr-14
25-14	12	4	16	75	0.010	1.60	0.547	0.310	No Trend	Not Stable	0.390	Jul-14
25-16	10	0	10	100	2.20	2.60	2.31	2.30	No Trend	Stable	2.20	Jul-14
27-08	27	0	27	100	0.650	1.90	1.31	1.40	No Trend	Stable	1.50	Apr-13
27-16	15	0	15	100	1.20	1.50	1.34	1.40	Decreasing	NA	1.20	Jul-14
27-26	15	0	15	100	1.60	2.00	1.75	1.70	Decreasing	NA	1.60	Jul-14
27-38	39	1	40	98	0.010	1.70	1.13	1.25	No Trend	Stable	1.20	Apr-14
27-39	38	1	39	97	0.010	2.20	1.20	1.30	No Trend	Stable	1.90	Apr-14
27-40	39	0	39	100	1.50	2.20	1.92	2.00	No Trend	Stable	1.90	Apr-14
27-42	15	0	15	100	0.072	0.600	0.401	0.430	No Trend	Stable	0.240	Jul-14
27-43	14	0	14	100	1.30	1.50	1.40	1.40	No Trend	Stable	1.40	Jul-14
27-48	15	0	15	100	0.280	1.30	0.745	0.670	Decreasing	NA	0.520	Jul-14
27-49	15	0	15	100	0.250	2.00	1.59	1.70	No Trend	Stable	1.60	Jul-14
28-06	9	0	9	100	0.070	1.00	0.614	0.680	No Trend	Stable	0.400	Jan-14
28-08	8	0	8	100	2.00	2.50	2.33	2.30	No Trend	Stable	2.50	Oct-13
28-09	12	0	12	100	1.10	3.10	2.01	2.05	No Trend	Stable	2.10	Jul-14
28-16	9	3	12	75	0.010	0.800	0.311	0.265	No Trend	Stable	0.800	Jul-14
28-17	15	0	15	100	0.440	0.690	0.574	0.570	No Trend	Stable	0.440	Jul-14
28-20	13	0	13	100	0.480	1.30	1.13	1.20	No Trend	Stable	0.740	Jul-14
28-21	11	0	11	100	0.530	8.60	3.16	2.70	No Trend	Stable	3.10	Jul-14
28-25	13	0	13	100	1.70	2.20	1.99	2.00	Decreasing	NA	1.80	Jul-14
28-28	14	0	14	100	0.590	1.20	0.951	0.955	No Trend	Stable	0.950	Apr-14
28-36	13	0	13	100	0.240	2.30	1.26	1.00	No Trend	Stable	1.20	Jul-14
28-40	12	0	12	100	1.00	1.30	1.17	1.20	No Trend	Stable	1.10	Jul-14
28-51	5	4	9	56	0.010	0.280	0.079	0.064	No Trend	Not Stable	0.098	Jul-14
30E-01	14	0	14	100	1.30	2.00	1.74	1.75	No Trend	Stable	1.80	Jul-14
34-06	0	14	14	0	0.010	0.010	0.010	0.010	>50% ND	NA	0.010	Jul-14
34-38	0	13	13	0	0.010	0.010	0.010	0.010	>50% ND	NA	0.010	Jul-14
34-50	10	0	10	100	0.870	1.00	0.969	0.980	No Trend	Stable	0.970	Jul-14
34-58	2	9	11	18	0.010	0.220	0.037	0.010	>50% ND	NA	0.220	Jul-14
34-63	6	2	8	75	0.010	1.30	0.401	0.275	No Trend	Not Stable	0.360	Jul-14
34-77	12	0	12	100	0.620	1.20	1.02	1.05	No Trend	Stable	1.10	Jul-14
36-17	12	0	12	100	0.860	1.10	0.982	0.990	No Trend	Stable	1.10	Jul-14
36-26	13	0	13	100	1.20	2.10	1.72	1.70	No Trend	Stable	1.90	Jul-14
36-31	8	0	8	100	1.30	1.90	1.58	1.50	Decreasing	NA	1.30	Jul-14
36-41	12	0	12	100	0.560	1.60	1.11	1.15	No Trend	Stable	1.50	Jul-14
36-43	12	0	12	100	0.390	0.630	0.548	0.550	No Trend	Stable	0.530	Jul-14
BGS-25	13	0	13	100	1.10	2.00	1.55	1.50	No Trend	Stable	2.00	Jul-14

TABLE 6-4

Non Parametric (Mann-Kendall) Trend Analysis of Hexavalent Chromium Trends in WTR-MM-2a Domestic Supply Wells*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

Well	Number of Detections	Number of Non-Detects	Total Number of Samples	Detect Frequency	Min (µg/L)	Max (µg/L)	Mean (µg/L)	Median (µg/L)	Trend	Stability	Last Result	Last Sample Date
BGS-27	12	0	12	100	0.480	1.30	0.972	0.970	No Trend	Stable	0.920	Jul-14
BGS-46	15	0	15	100	0.740	2.00	1.63	1.70	Decreasing	NA	1.20	Jul-14
BGS-48	13	1	14	93	0.010	0.540	0.235	0.155	Decreasing	NA	0.010	Jul-14

Notes:

Trend analysis considered groundwater data from January 1, 2011 through September 30, 2014.

Trend analysis performed using Mann Kendall single-tailed test at 0.05 significance level.

For monitoring points exhibiting no trend at the 95% confidence level, concentrations are deemed stable if the coefficient of variation (COV) is equal to or less than one.

>50% ND = greater than 50 percent of samples were not detected at laboratory reporting limits.

MK= Mann Kendall single tailed test

µg/L = micrograms per liter

TABLE 6-5

Evaluation of Agricultural Byproducts in Monitoring Wells Located Outside of the Hydraulic Capture Zones in ATU Areas*Third Quarter 2014 Agricultural Treatment Units Monitoring Report**Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California*

^a Monitoring Well	^b Nitrate (as N) Maximum Concentration (mg/L)	Nitrate (as N) Current Reporting Period (mg/L)	^c Nitrate (as N) Current Reporting Period to Maximum Concentration	^b TDS Maximum Concentration (mg/L)	TDS Current Reporting Period (mg/L)	TDS Current Reporting Period to Maximum Concentration
MW-83D	72	53	-26%	3,920	3,500	-11%
MW-83S	66.5	40	-40%	3,760	3,400	-10%
MW-84S	13.1	7.0	-47%	3,490	3,500	0%
MW-85S	11	8.8	-20%	1,960	2,700	38%
MW-89S	68.7	48	-30%	4,180	4,100	-2%
DW-02	113	32	-72%	3,525	2,900	-18%

NOTES:

^aOnly monitoring wells with 4 or more sample results from April 1, 2012 through March 31, 2014 that are also located outside of the hydraulic capture zone of the shallow zone of the Upper Aquifer (see Figure 3-1) during the Third Quarter of 2014 were included in this evaluation.

^bMaximum concentrations are the maximum nitrate (as N) or TDS concentration from April 1, 2012 through March 31, 2014.

^cPercent change is calculated as the percentage that nitrate (as N) or TDS increased (positive) or decreased (negative) during current reporting period when compared to the maximum concentration from April 1, 2013 through March 31, 2014.

^dThere are insufficient radionuclide data for comparison at this time. Second Quarter 2014 was the first time samples were analyzed for these constituents.

mg/L = milligrams per liter

Nitrate (as N) = nitrate as nitrogen

TDS = total dissolved solids

Table 6-6

Baseline Drawdown Monitoring in Wells Located Near Domestic and Agricultural Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID ^a	UUA Nearest MW ^b	Reference Level Depth to Water UUA (ft btoc) ^c	Reference Level Groundwater Elevation UUA (ft msl) ^c	Number of Reference Points UUA	LUA Nearest MW ^b	Reference Level Depth to Water LUA (ft btoc) ^c	Reference Level Groundwater Elevation LUA (ft msl) ^c	Number of Reference Points LUA	DOM Well Depth to Water Where Wetted screen Depth is 25% less than Reference Level (ft bgs) ^d	Third Quarter Depth to Water LUA (ft btoc) ^e	Trigger Elevation where DOM well wetted screen depth is 25% less than reference level (ft msl) ^d	Third Quarter Groundwater Elevation LUA (ft msl) ^e	Dom Well Screen Depth Top (ft bgs)	Dom Well Screen Depth Bottom (ft bgs)	Approximate Dom Well Total Depth (ft bgs)	Trigger Level Exceeded? ^f	Source of Well Construction info
01-01A	SC-MW-14S	87.66	2104.71	4	SC-MW-14D	81.73	2110.62	4	137.50	81.87	2055.5	2110.48	100	250	250	No	DOM Well
01-02	SA-MW-25S	85.26	2112.99	4	SA-MW-25D	84.89	2113.35	4	116.00	85.28	2082	2112.96	86	206	206	No	DOM Well
01-16	SC-MW-14S	87.66	2104.71	4	SC-MW-14D	81.73	2110.62	4	96.26	81.87	2093.74	2110.48	25	140	140	No	DOM Well
02-02A ^g	MW-67A	100.54	2112.16	4	MW-67B	100.27	2112.71	4	197.50	99.52	2016.4	2113.46	160-200	180-230	230	No	DOM Well
02-02B	MW-67A	100.54	2112.16	4	MW-67B	100.27	2112.71	4	125.00	99.52	2085.79	2113.46	---	---	---	No	nearby DOM Well
02-07	MW-67A	100.54	2112.16	4	MW-67B	100.27	2112.71	4	125.00	99.52	2085.79	2113.46	100	200	200	No	DOM Well
02-23	MW-67A	100.54	2112.16	4	MW-67B	100.27	2112.71	4	107.50	99.52	2103.29	2113.46	---	---	130	No	DOM Well
22-30	MW-118S	76.12	2085.47	4	MW-118S	76.12	2085.47	4	97.50	75.47	2061.63	2086.12	85	135	135	No	DOM Well
23-07	MW-129S	84.36	2077.59	4	MW-129S	84.36	2077.59	4	105.30	83.91	2053.7	2078.04	70	170	170	No	DOM Well
23-24	MW-85S	77.33	2079.68	4	MW-85D	96.25	2060.58	5	130.49	100.92	2027.51	2055.91	75	235	235	No	DOM Well
23-25	MW-55S	82.35	2082.08	4	MW-55A	106.49	2060.79	4	125.00	112.03	2036.04	2055.25	---	---	---	No	nearby DOM Well
23-27	MW-72S	84.20	2076.87	4	MW-72D	104.87	2056.39	4	245.00	107.62	1916.04	2053.64	230	290	290	No	DOM Well
23-28	MW-105S	79.31	2074.84	4	MW-105D	84.91	2069.35	4	100.75	85.30	2051.33	2068.96	---	---	---	No	nearby MW
24-03	MW-79S	80.11	2079.75	4	MW-79D	97.44	2062.63	4	135.00	98.89	2024.81	2061.18	100	240	240	No	DOM Well
24-05	MW-79S	80.11	2079.75	4	MW-79D	97.44	2062.63	4	104.85	98.89	2054.77	2061.18	70	150	160	No	DOM Well
25-14	MW-88S	82.35	2089.47	5	MW-88D	88.78	2083.03	4	127.00	89.18	2041.28	2082.63	102	202	202	No	DOM Well
27-17	MW-54	95.88	2093.50	4	MW-54	95.88	2093.50	4	115.50	95.77	2072.5	2093.61	98	168	169	No	DOM Well
27-26	MW-66A	89.62	2090.16	4	MW-66A	89.62	2090.16	4	98.90	88.97	2071.16	2090.81	80	130	130	No	DOM Well
27-41	MW-168S	87.35	2092.40	4	MW-168D	88.46	2091.24	4	120.00	87.57	2056.61	2092.13	---	---	135	No	DOM Well
34-38	MW-75D	103.36	2090.57	4	MW-75D	103.36	2090.57	4	156.00	103.38	2043.42	2090.55	---	---	225	No	DOM Well

^a Information for domestic and agricultural supply wells potentially affected by drawdown listed here are required by WTR-MM-2c.

^b Monitoring wells screened across the shallow zone of the Upper Aquifer (UUA) and deep zone of the Upper Aquifer (LUA) were selected to estimate baseline water levels at nearby private domestic and agricultural wells. In areas where the Upper Aquifer is thin, a single monitoring well was used to estimate baseline water levels.

^c The depth to water and groundwater elevations listed here are the maximum (for depth to water) and minimum (for groundwater elevations) measured from April 1, 2013 through March 31, 2014. The calculated elevations for wells screened across the deep zone of the Upper Aquifer (LUA) were used to estimate pre-remedial reference drawdown elevations at the domestic and agricultural supply wells.

^d Calculated using the reference level LUA monitoring well groundwater elevation and the domestic or agricultural supply well screen information. The trigger elevation is the depth at which 25% of the wetted portion of the domestic or agricultural supply well screen will be dry.

^e The Third Quarter 2014 depth to water and groundwater elevations for the LUA wells were reviewed to estimate if drawdown exceeding trigger levels had potentially occurred at the domestic and agricultural supply wells.

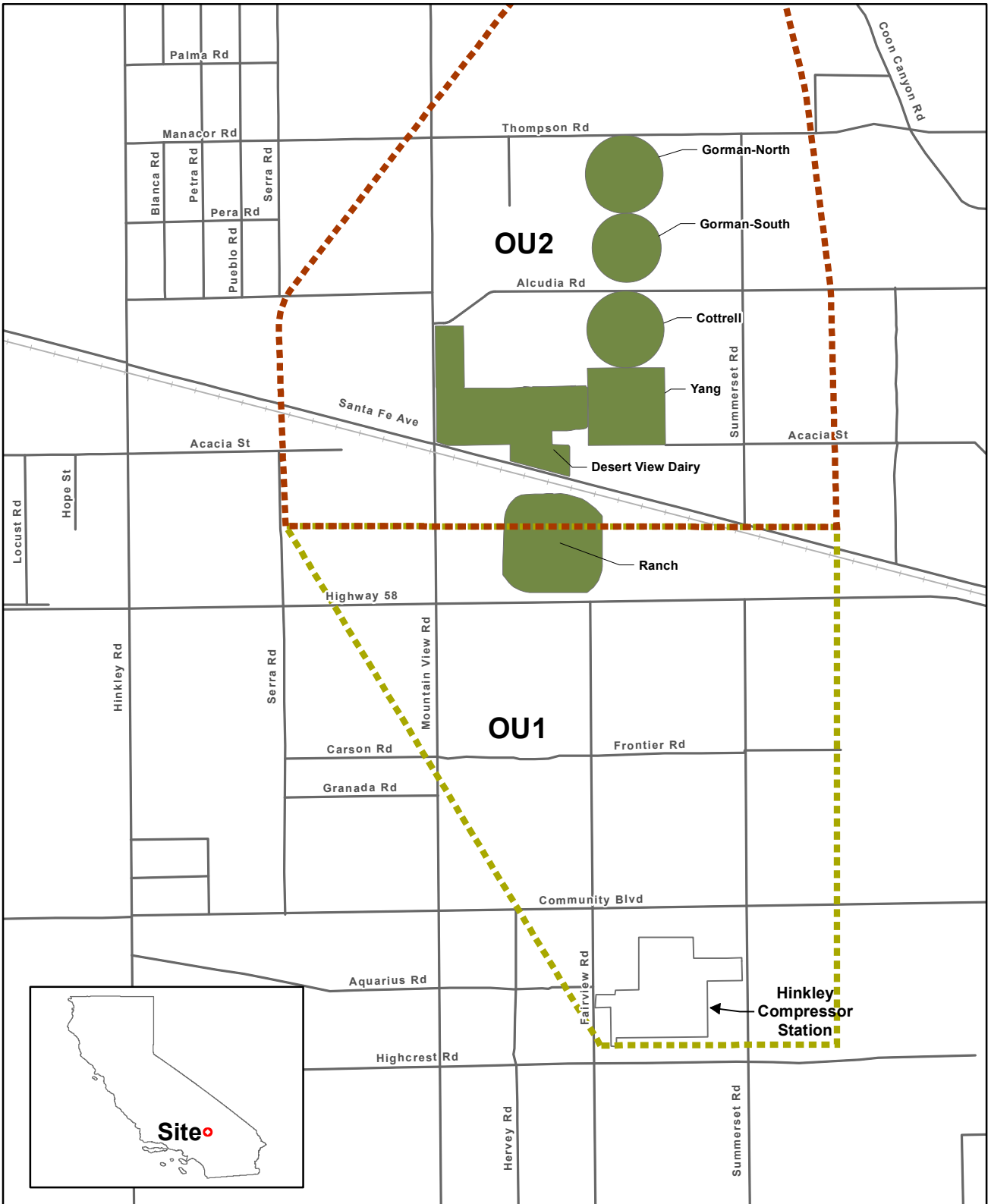
^f Based on Third Quarter 2014 groundwater measurements no domestic or agricultural supply wells lost 25% of the wetted screen depth in comparison to the reference levels provided in this table.

^g 02-02A has two screened intervals, one from 160-180 ft bgs and a second from 200-230 ft bgs.




2Q = Second Quarter
 DOM = Domestic or Agricultural Supply Well
 ft btoc = feet below top of casing
 ft bgs = feet below ground surface
 ft msl = feet above mean sea level
 MW = monitoring well
 UUA = Shallow Zone of Upper Aquifer
 LUA = Deep Zone of Upper Aquifer
 --- = unknown

Figures

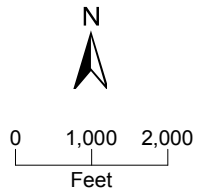
\\MNUSTR\CTGF\S01\PROJECTS\PGEHINKLEY\20000353\MAPFILES\2014\ATU_REPORT\Q3\FIG1-1_SITE_LOCATION_MAP.MXD MCLAY 11/14/2014



LEGEND

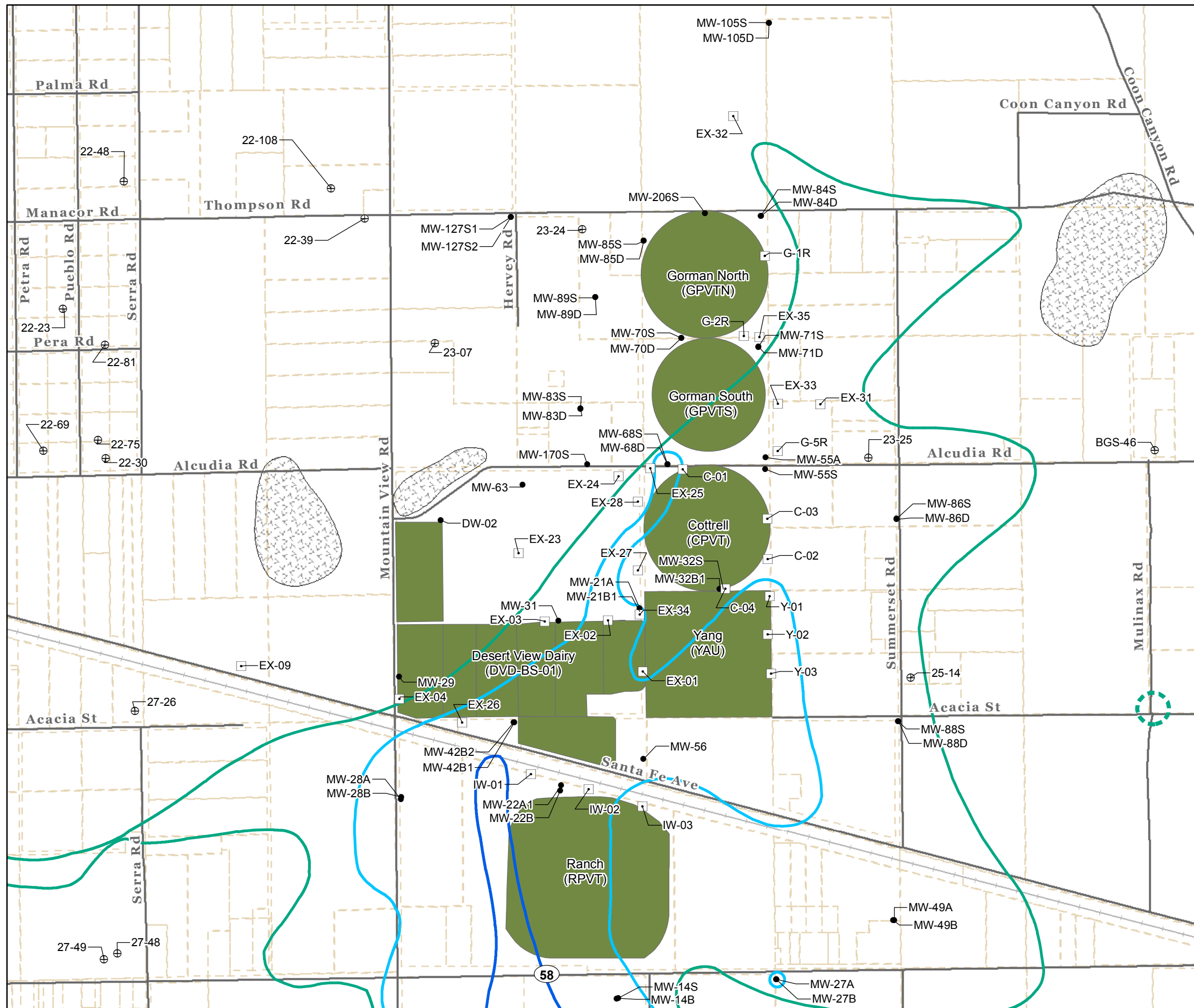
-  Active Agricultural Treatment Units
-  Operable Unit 1
-  Operable Unit 2

OU = Operable Unit



**FIGURE 1-1
SITE LOCATION MAP**

THIRD QUARTER 2014 AGRICULTURAL
TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA



LEGEND

- Groundwater Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well
- Extraction Well
- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- ▭ County parcels
- Approximate outline of Cr(VI) or Cr(T) in Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014

ATU = Agricultural Treatment Unit
EIR = Environmental Impact Report

Irrigation Water Supply:
GPVTN = Gorman North
GPVTS = Gorman South
CPVT = Cottrell
RPVT = Ranch
YAU = Yang
DVD-BS-01 = Desert View Dairy

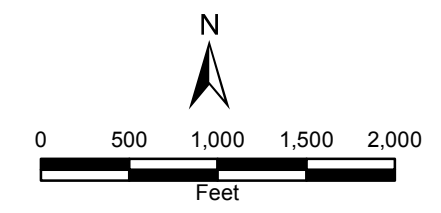
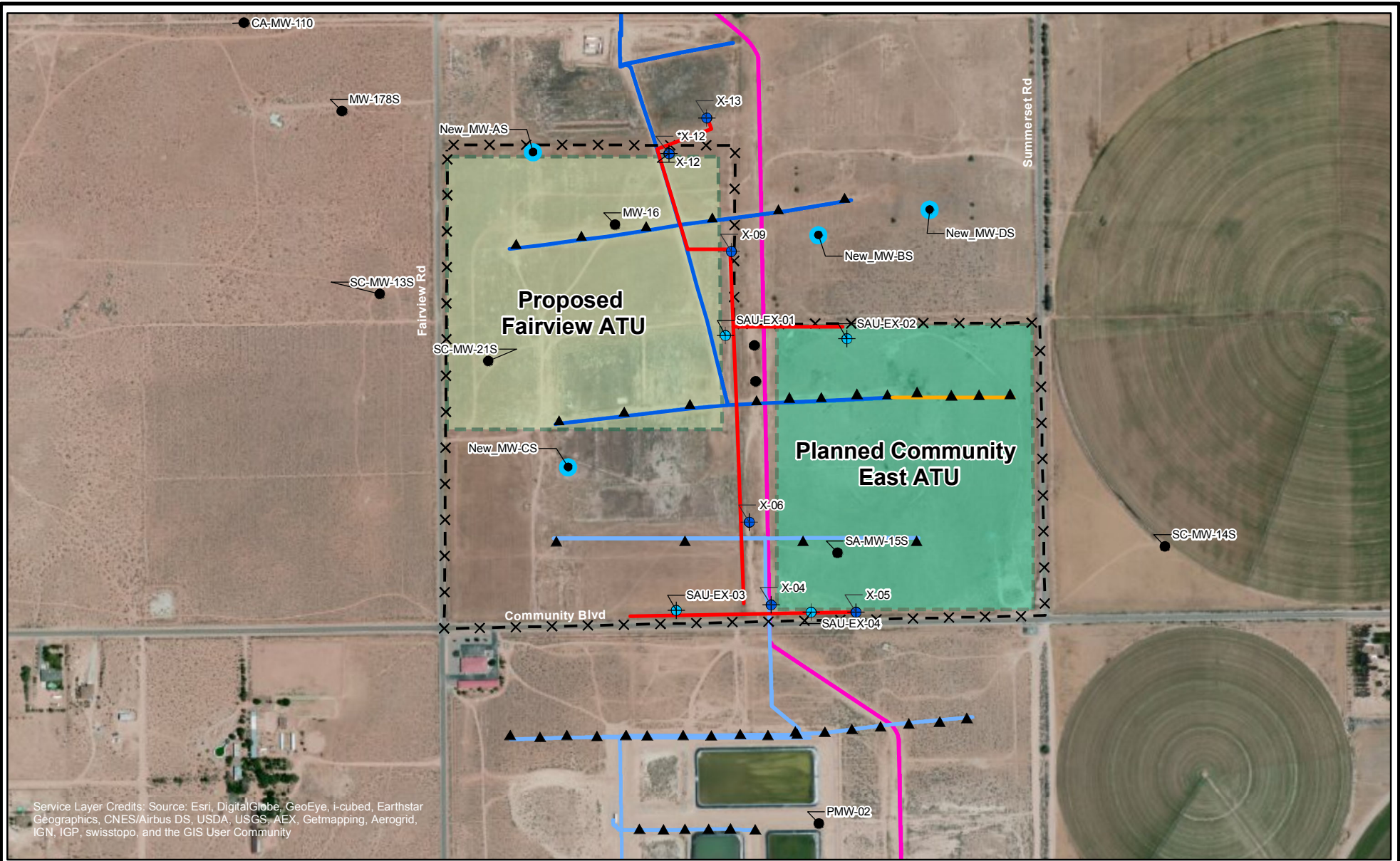


FIGURE 1-2
AGRICULTURAL TREATMENT UNITS
GROUNDWATER MONITORING AND
EXTRACTION WELL LOCATIONS
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



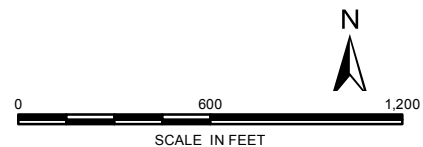
Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

CITY: DENTON DIV: GROUP: ENV/GIS DB: GRIFFITH ID: PIC: PM: TM: PROJECT: PATH: G:\SISRC\00068\001_PGE_Hinkley\GIS\ArcMap_MXDATA\U03\Fig 2-1 CommunityEastATU.dwg 10/01/2014 10:18:51 AM

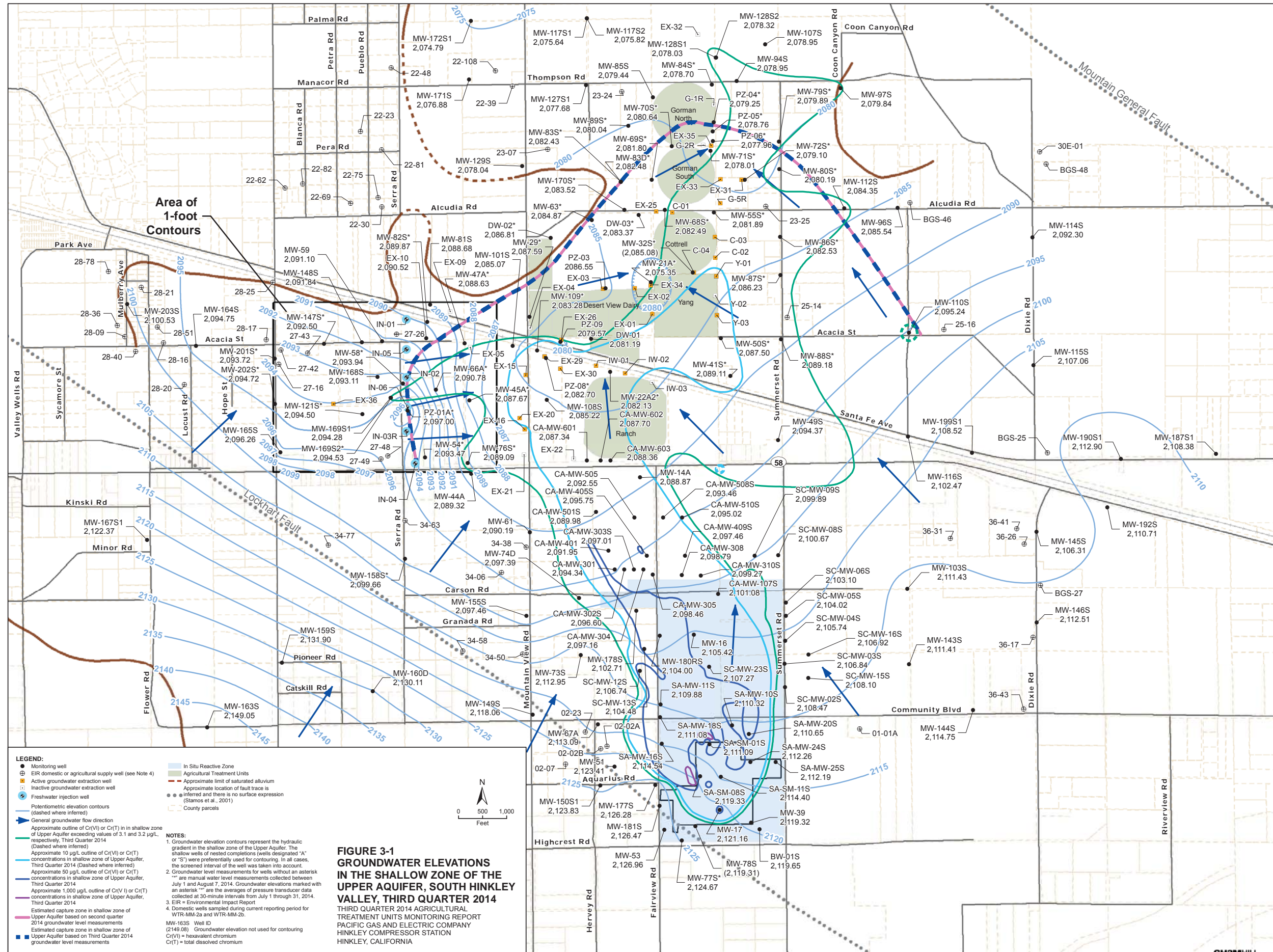
Legend

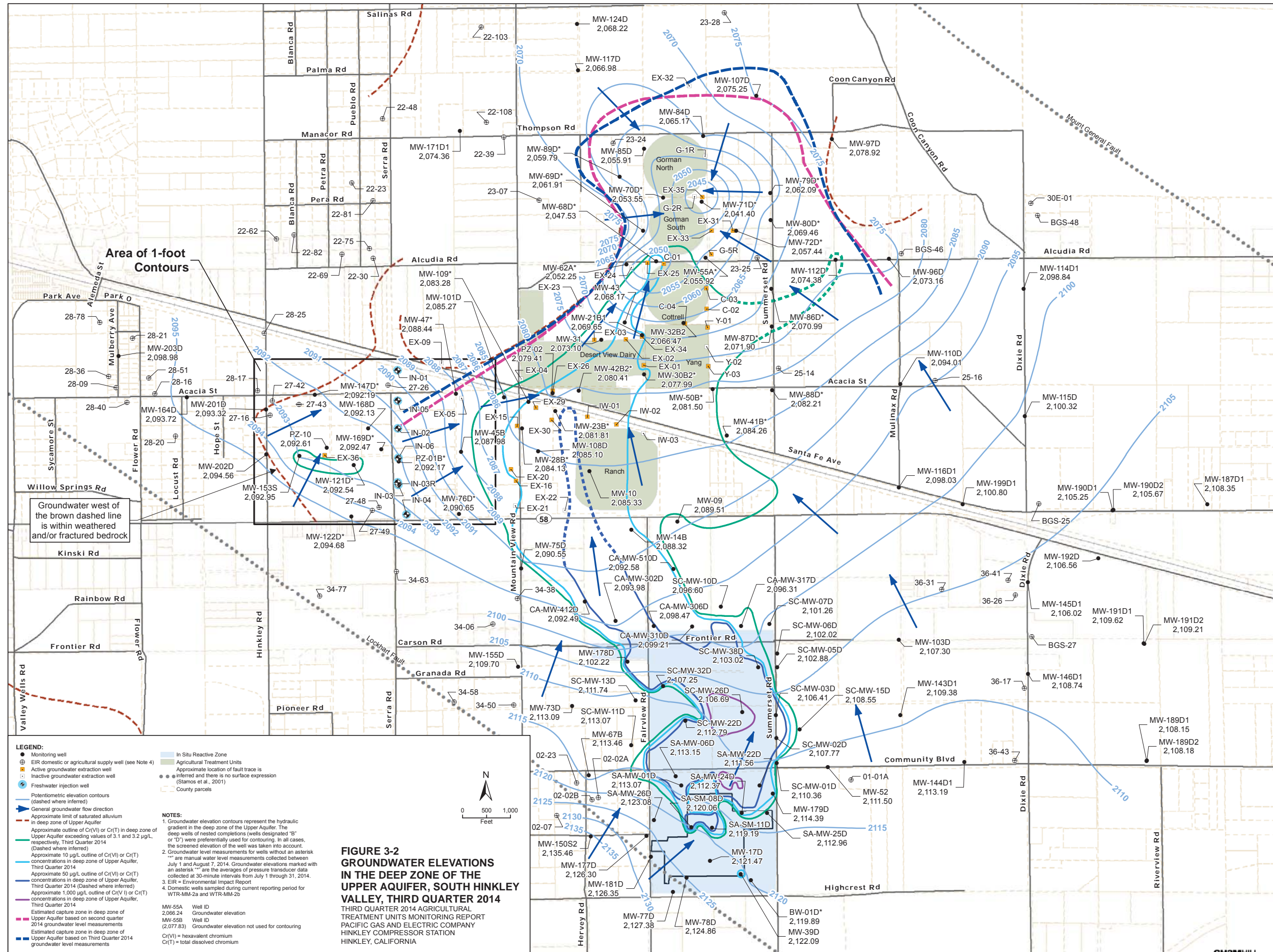
- Southern ATU monitoring wells
- Planned Monitoring Wells
- ◆ Tier I Extraction Wells
- Tier II Extraction Wells
- ▲ In Situ Reactive Zone Remediation wells
- Community East ATU Design area
- Proposed Future ATU
- ✕ Exterior Fencing
- Fresh Water Injection & Supply Piping
- Source Area In Situ Reactive Zone Piping
- South Central Re-Injection Area In Situ Reactive Zone Piping
- Planned ATU Piping
- Planned SCRIA Piping

Notes:
 1. Wells with labels are part of Southern ATU Monitoring Network
 ATU - Agricultural Treatment Unit
 *Well is both an irrigation supply well and part of the Southern ATU Monitoring Network



PACIFIC GAS AND ELECTRIC COMPANY HINKLEY, CALIFORNIA	
COMMUNITY EAST ATU DESIGN	
	FIGURE 2-1







- LEGEND**
- Randomly Generated Soil Sample Location
 - Agricultural Treatment Unit
 - - - County parcels
- 20 acre grids**
- Cortell
 - DVD
 - Gorman North
 - Gorman South
 - Ranch
 - Yang

Notes:
 ATU = Agricultural Treatment Unit

Soil sample locations were identified by placing a 20 acre grid over each ATU area and then using a random point generator to select sample locations at a frequency of at least one sample per 20 acres of each ATU.

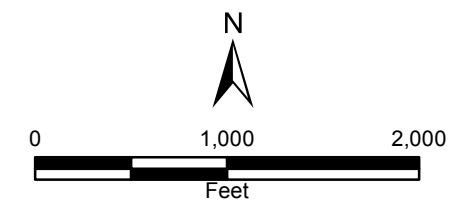
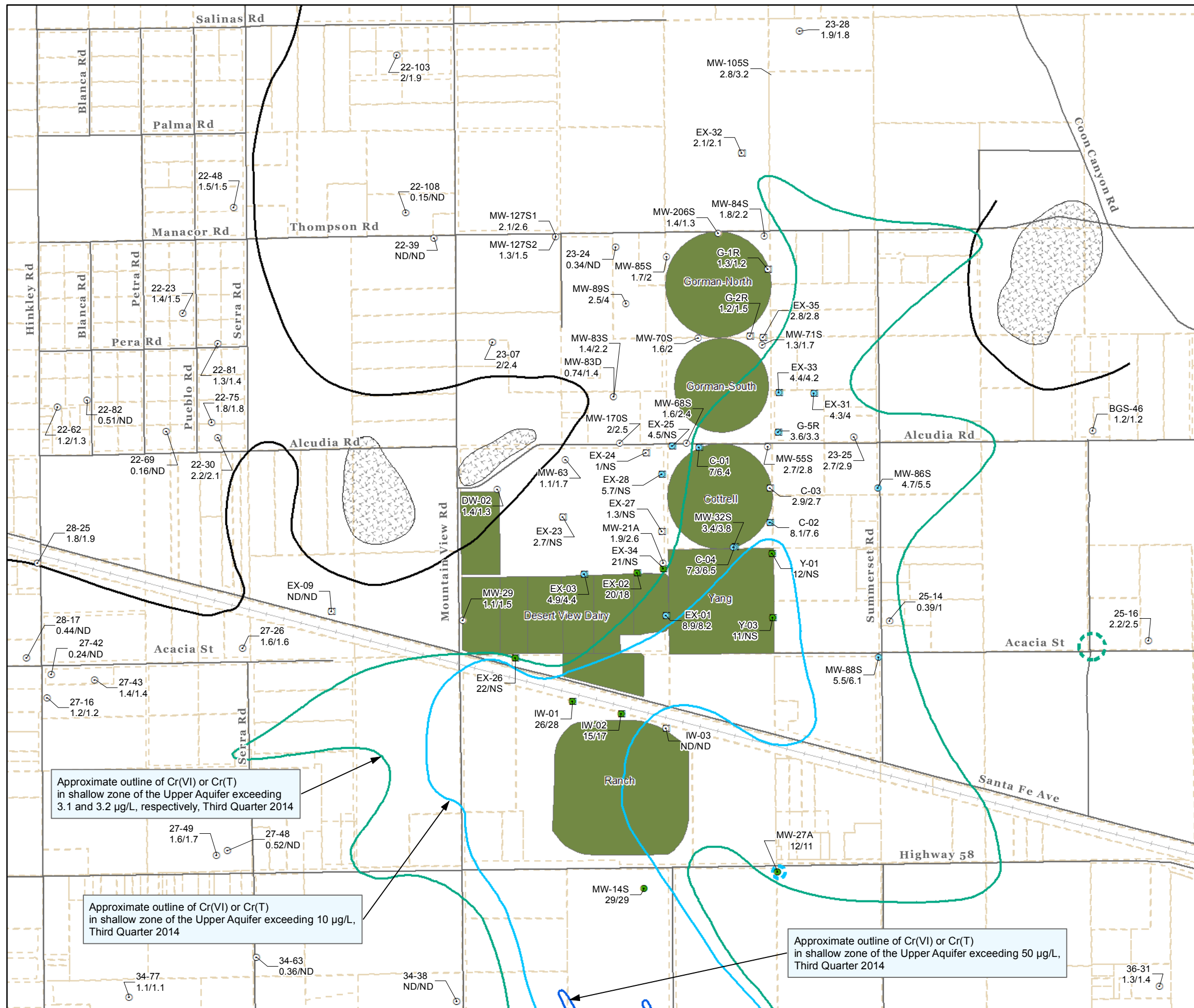


FIGURE 4-1
SOIL SAMPLE LOCATIONS
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



LEGEND

- Approximate limit of saturated alluvium in shallow zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in shallow zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014
- Active agricultural treatment units
- ▨ Bedrock exposed at ground surface
- County parcels

Groundwater Cr(VI) concentrations in ATU monitoring and supply wells

- 10 to 50 µg/L
- 3.1 to 10 µg/L
- Less than 3.1 µg/L or ND

⊕ EIR domestic supply wells
 □ Extraction wells

MW-83S Well ID
 1.4/2.2 Cr(VI)/Cr(T) concentrations in µg/L; maximum of primary and duplicate samples during Third Quarter 2014 sampling.

Notes:

- 1) Contours were previously reported in the Third Quarter 2014 Groundwater Monitoring Report and Domestic Well Sampling Results, Sitewide Groundwater Monitoring Program (CH2M HILL, 2014)
- 2) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

ATU = Agricultural Treatment Unit
 Cr(VI) = hexavalent chromium
 Cr(T) = total dissolved chromium
 EIR = Environmental Impact Report
 µg/L = micrograms per liter
 ND = not detected above the laboratory reporting limit

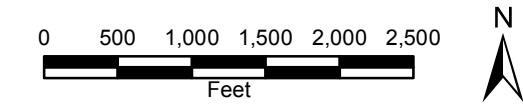
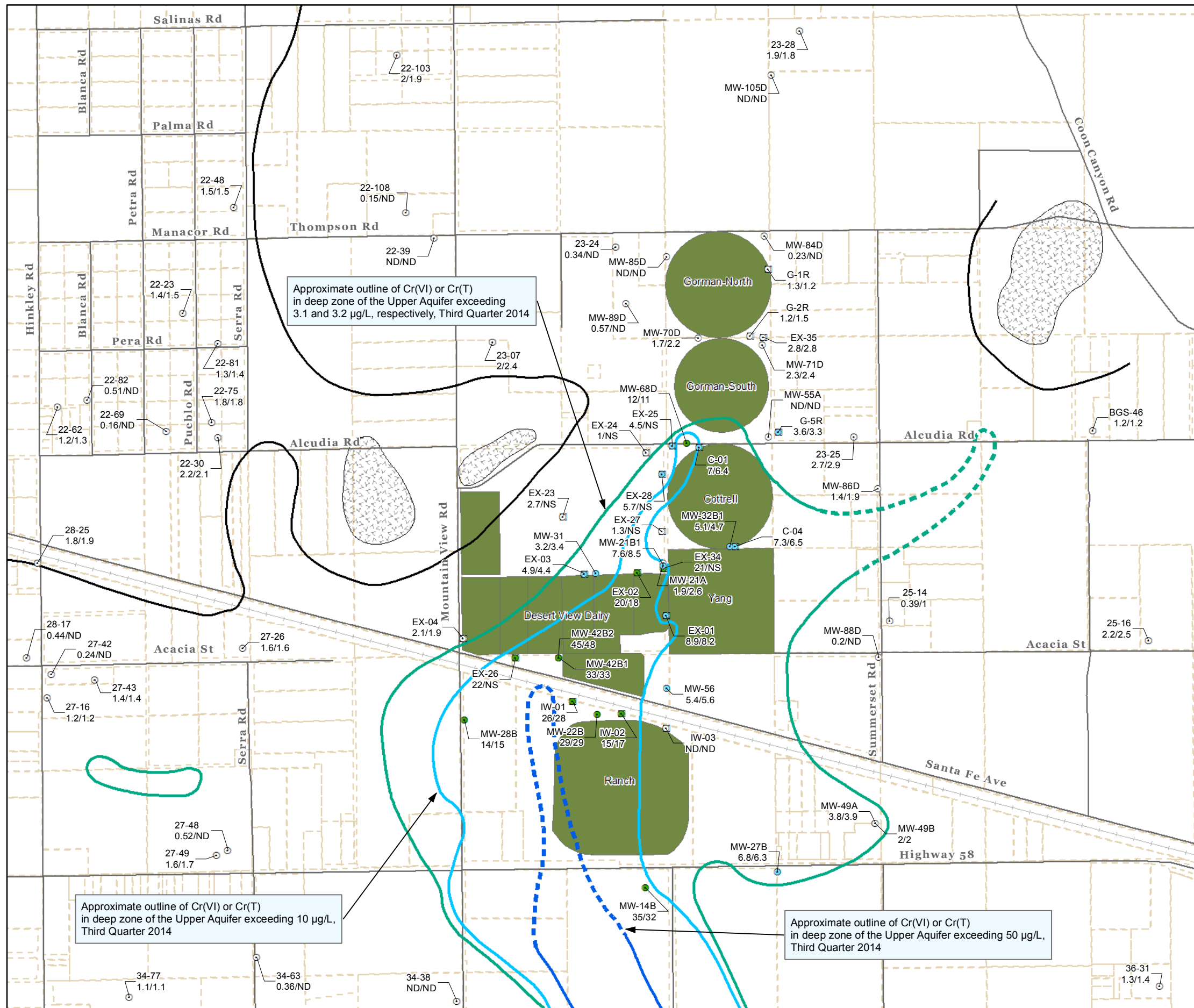


FIGURE 5-1
CHROMIUM ISOCONCENTRATION
CONTOURS (SHALLOW ZONE OF THE
UPPER AQUIFER)
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



LEGEND

- Approximate limit of saturated alluvium in shallow zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in deep zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Active agricultural treatment units
- ▨ Bedrock exposed at ground surface
- ▭ County parcels

Groundwater Cr(VI) concentrations in monitoring wells:

- 10 to 50 µg/L
- 3.1 to 10 µg/L
- Less than 3.1 µg/L or ND

⊕ EIR domestic supply wells
 □ Extraction wells

MW-88D Well ID
 0.2/ND Cr(VI)/Cr(T) concentrations in µg/L; maximum of primary and duplicate samples during Third Quarter 2014 sampling.

Notes:

- 1) Contours were previously reported in the Third Quarter 2014 Groundwater Monitoring Report and Domestic Well Sampling Results, Sitewide Groundwater Monitoring Program (CH2M HILL, 2014)
- 2) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

ATU = Agricultural Treatment Unit
 Cr(VI) = hexavalent chromium
 Cr(T) = total dissolved chromium
 EIR = Environmental Impact Report
 µg/L = micrograms per liter
 ND = not detected above the laboratory reporting limit

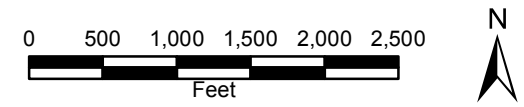
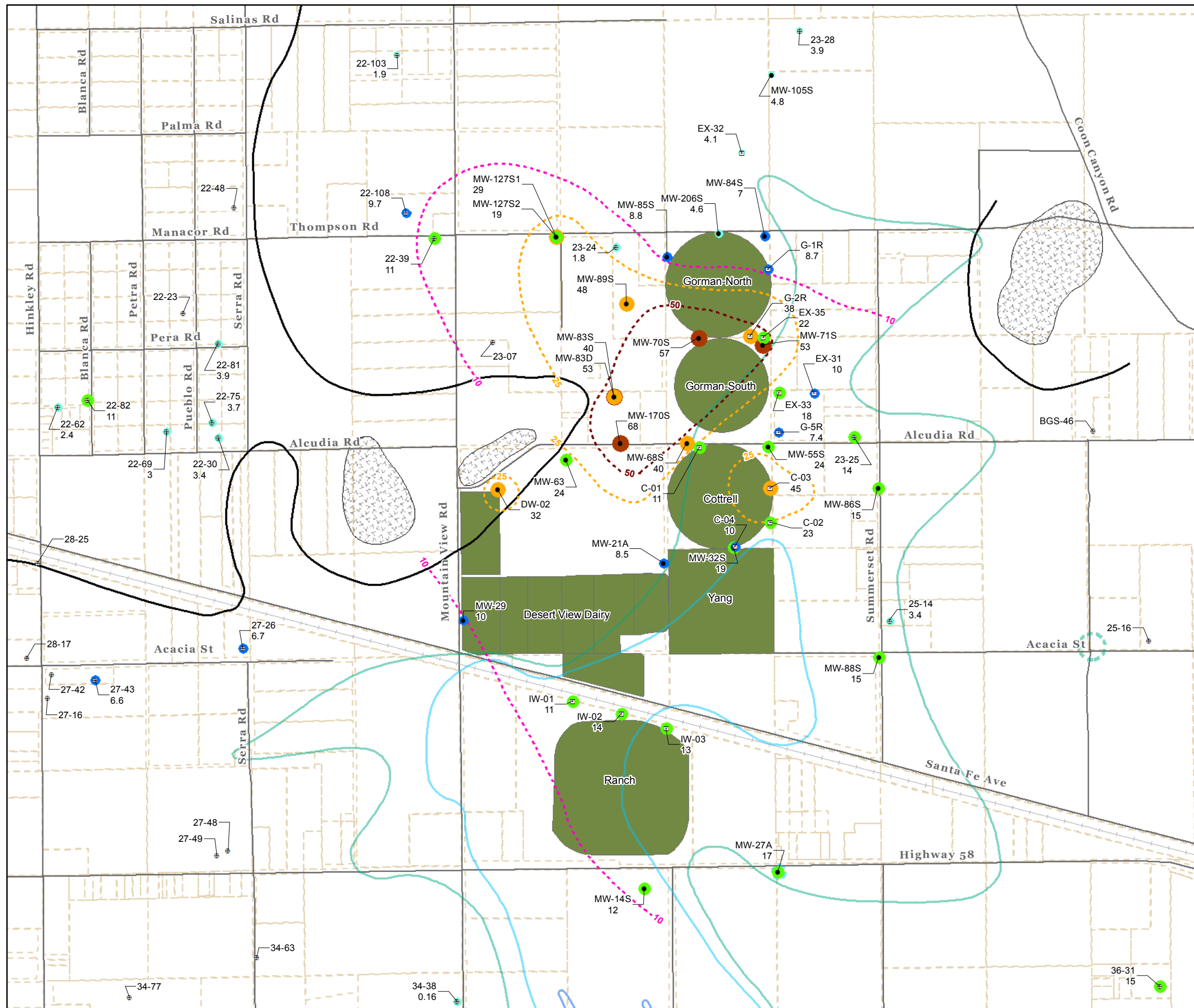


FIGURE 5-2
CHROMIUM ISOCONCENTRATION
CONTOURS (DEEP ZONE OF THE
UPPER AQUIFER)
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



LEGEND

- Extraction Well
- Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well

Nitrate value in mg/L

- 0 - 5 mg/L
- >5 - 10 mg/L
- >10 - 25 mg/L
- >25 - 50 mg/L
- >50 mg/L

Approximate Nitrate Isoconcentration Contour

- 10 mg/L
- 25 mg/L
- 50 mg/L

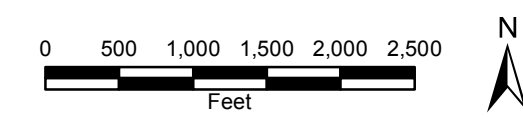
- Approximate limit of saturated alluvium in shallow zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in shallow zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014

- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- ▭ County parcels

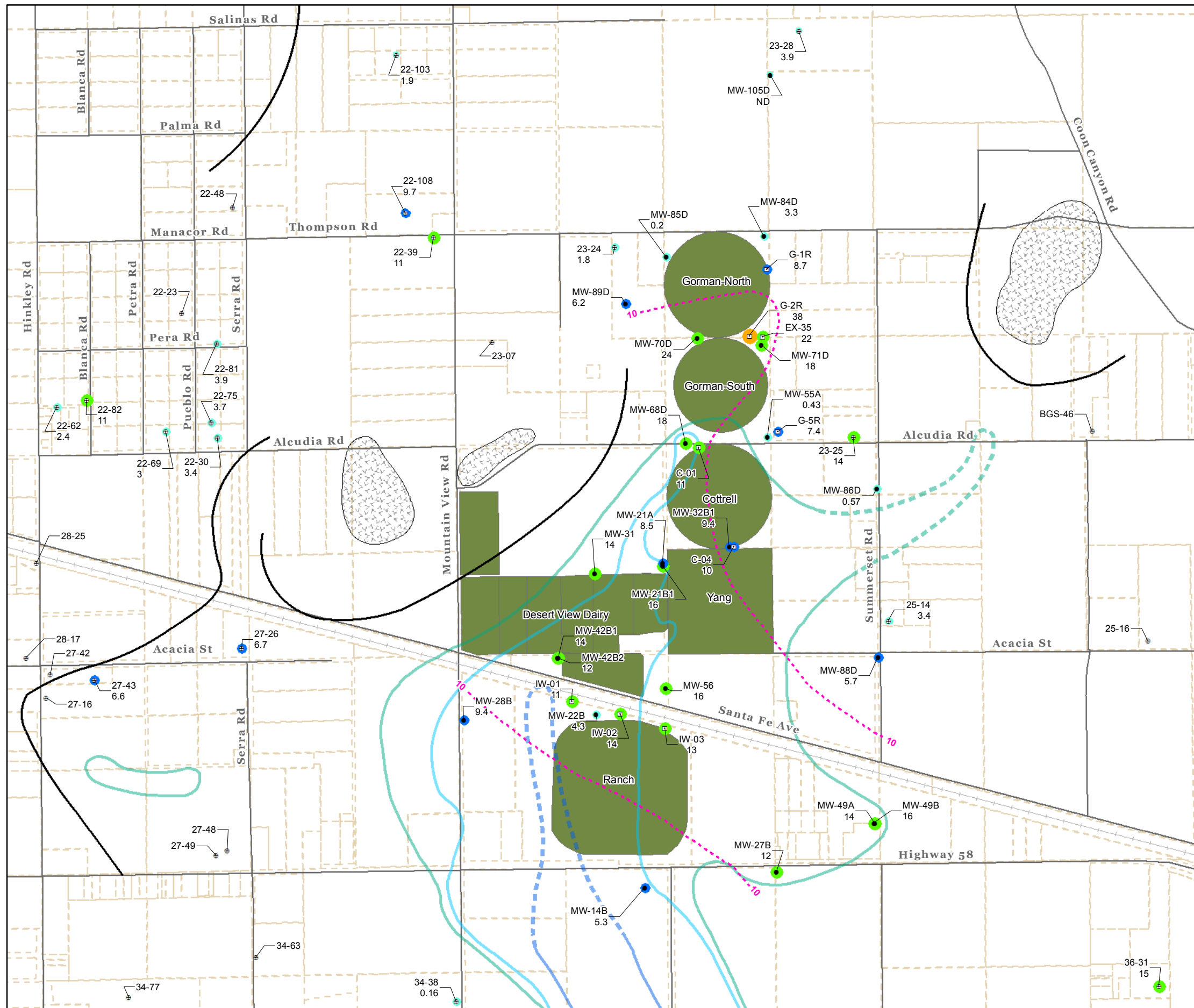
Note:

- 1) The MCL for nitrate (as nitrogen) is 10 mg/L.
- 2) Extraction wells posted on this map may be screened across more than the shallow zone of the Upper Aquifer. Therefore these nitrate data may not be representative of shallow zone conditions. These data are posted but were not included in contouring.
- 3) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

EIR = Environmental Impact Report
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
Nitrate = Nitrate (as Nitrogen)
µg/L = micrograms per liter



**FIGURE 5-3
NITRATE (AS NITROGEN)
ISOCONCENTRATION CONTOURS
(SHALLOW ZONE OF THE
UPPER AQUIFER)**
THIRD QUARTER 2014 AGRICULTURAL
TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA



LEGEND

- Extraction Well
- Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well

Nitrate value in mg/L

- 0 - 5 mg/L
- >5 - 10 mg/L
- >10 - 25 mg/L
- >25 - 50 mg/L

Approximate Nitrate Isoconcentration Contour

- 10 mg/L
- Approximate limit of saturated alluvium in deep zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in deep zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- County parcels

Note:

- 1) The MCL for nitrate (as nitrogen) is 10 mg/L.
- 2) Extraction wells posted on this map may be screened across more than the deep zone of the Upper Aquifer. Therefore these nitrate data may not be representative of deep zone conditions. These data are posted but were not included in contouring.
- 3) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

EIR = Environmental Impact Report
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
Nitrate = Nitrate (as Nitrogen)
µg/L = micrograms per liter

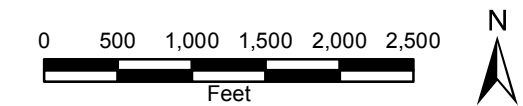
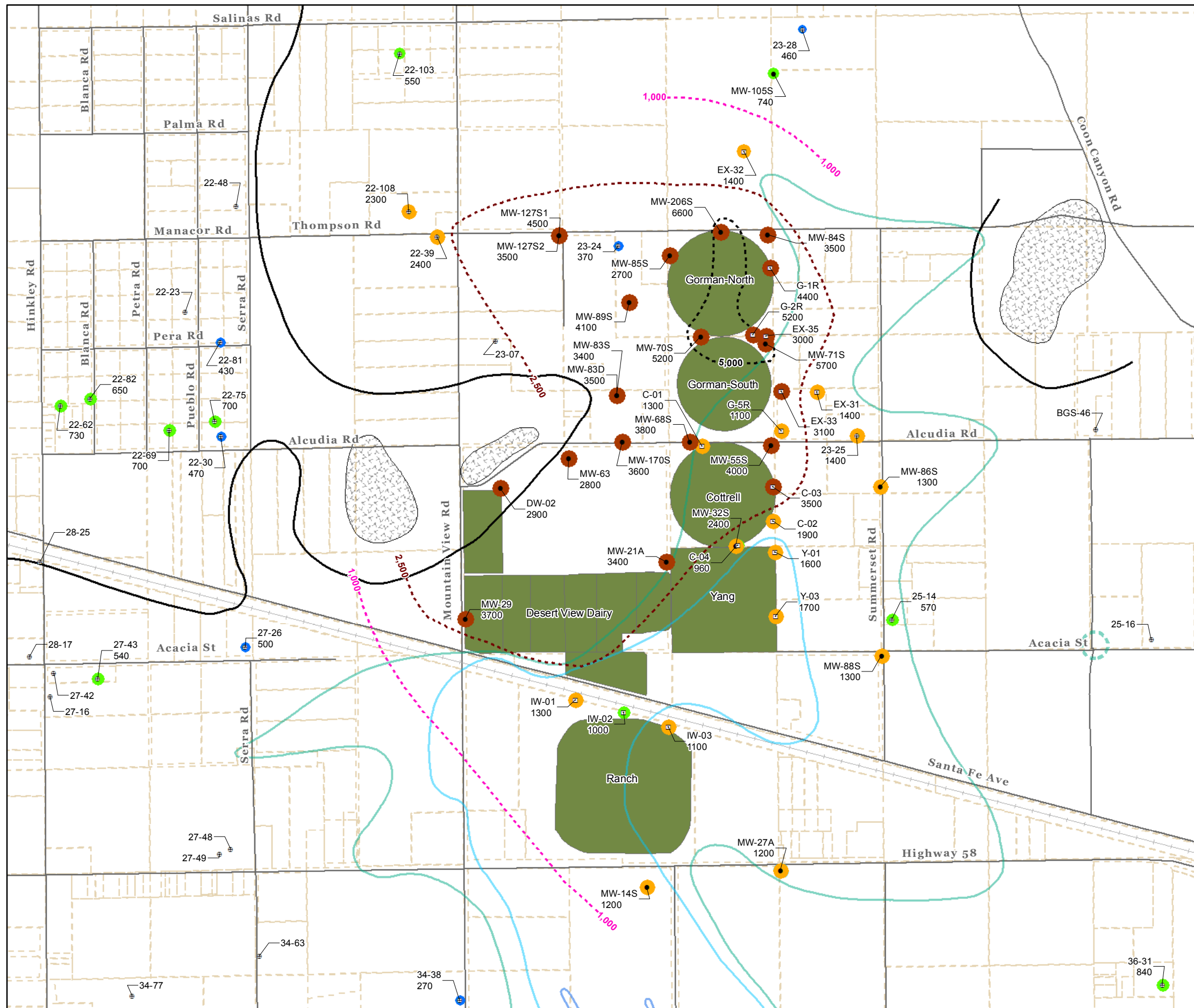


FIGURE 5-4
NITRATE (AS NITROGEN)
ISOCONCENTRATION CONTOURS
(DEEP ZONE OF THE UPPER AQUIFER)
THIRD QUARTER 2014 AGRICULTURAL
TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA



LEGEND

- Extraction Well
- Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well

TDS value in mg/L

- <500 mg/L
- >500 - 1,000 mg/L
- >1,000 - 2,500 mg/L
- >2,500 mg/L

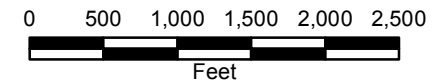
Approximate TDS Isoconcentration Contour

- 1,000 mg/L
- 2,500 mg/L
- 5,000 mg/L

- Approximate limit of saturated alluvium in shallow zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in shallow zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014
- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- County parcels

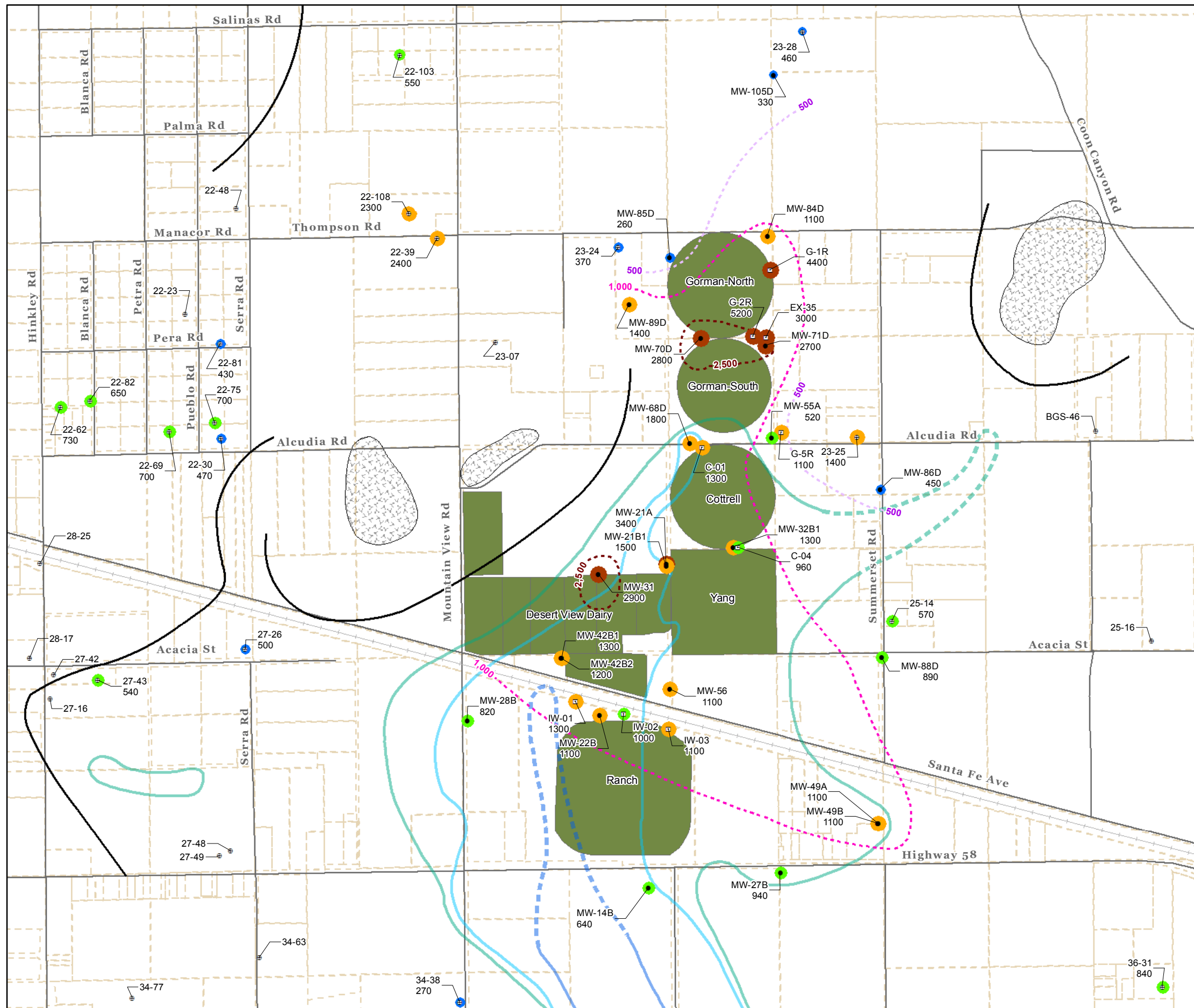
- Note:**
- 1) The Federal and California Secondary MCL for TDS is 500 mg/L
 - 2) Extraction wells posted on this map may be screened across more than the shallow zone of the Upper Aquifer. Therefore the TDS data may not be representative of shallow zone conditions. These data are posted but were not included in contouring.
 - 3) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

EIR = Environmental Impact Report
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
TDS = total dissolved solids
µg/L = micrograms per liter



**FIGURE 5-5
TOTAL DISSOLVED SOLIDS
ISOCONCENTRATION CONTOURS
(SHALLOW ZONE OF THE
UPPER AQUIFER)**

THIRD QUARTER 2014 AGRICULTURAL
TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA



LEGEND

- Extraction Well
- Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well

TDS value in mg/L

- <500 mg/L
- >500 - 1,000 mg/L
- >1,000 - 2,500 mg/L
- >2,500 mg/L

Approximate TDS Isoconcentration Contour

- 500 mg/L
- 1,000 mg/L
- 2,500 mg/L

- Approximate limit of saturated alluvium in deep zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in deep zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in deep zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)

- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- County parcels

Notes:

- 1) The Federal and California Secondary MCL for TDS is 500 mg/L
- 2) Extraction wells posted on this map may be screened across more than the deep zone of the Upper Aquifer. Therefore the TDS data may not be representative of deep zone conditions. These data are posted but were not included in contouring.
- 3) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

EIR = Environmental Impact Report
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
TDS = total dissolved solids
µg/L = micrograms per liter

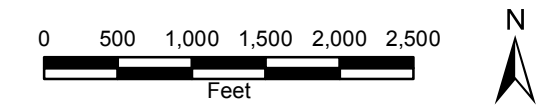
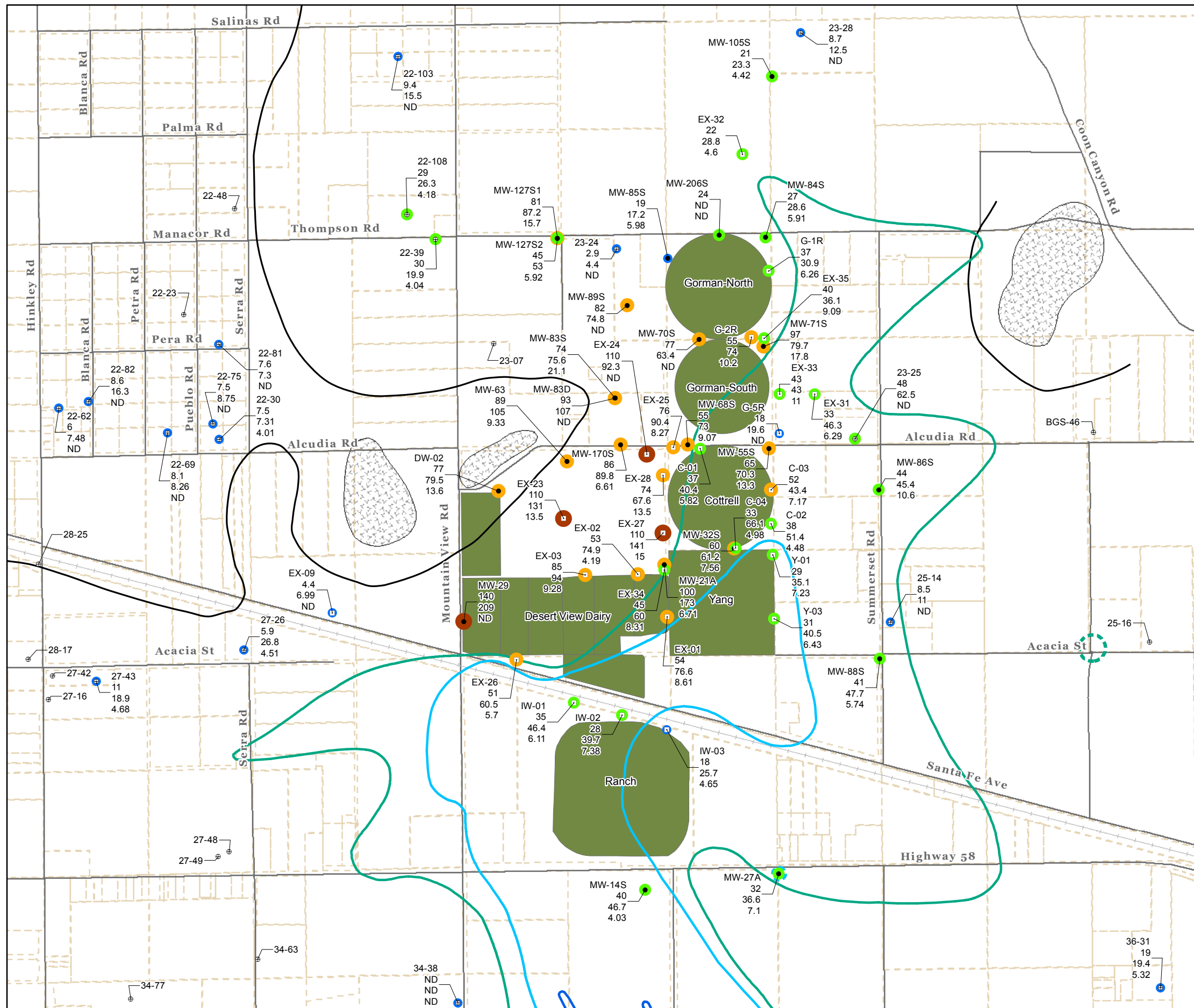


FIGURE 5-6
TOTAL DISSOLVED SOLIDS
ISOCONCENTRATION CONTOURS
(DEEP ZONE OF THE UPPER AQUIFER)
THIRD QUARTER 2014 AGRICULTURAL TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA



LEGEND

- Extraction Well
- Monitoring Well
- ⊕ EIR Domestic or Agricultural Supply Well

Dissolved Uranium value pCi/L

- <20 pCi/L
- >20 - 50 pCi/L
- >50 - 100 pCi/L
- >100 pCi/L

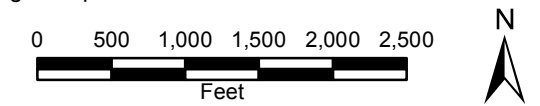
- Approximate limit of saturated alluvium in shallow zone of Upper Aquifer
- Approximate outline of Cr(VI) or Cr(T) in shallow zone of Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014 (Dashed where inferred)
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in shallow zone of Upper Aquifer, Third Quarter 2014
- Active Agricultural Treatment Units
- ▨ Bedrock exposed at ground surface
- ▭ County parcels

MW-127S1 = Well ID
 81 = Dissolved Uranium
 87.2 = Gross Alpha
 15.7 = Gross Beta

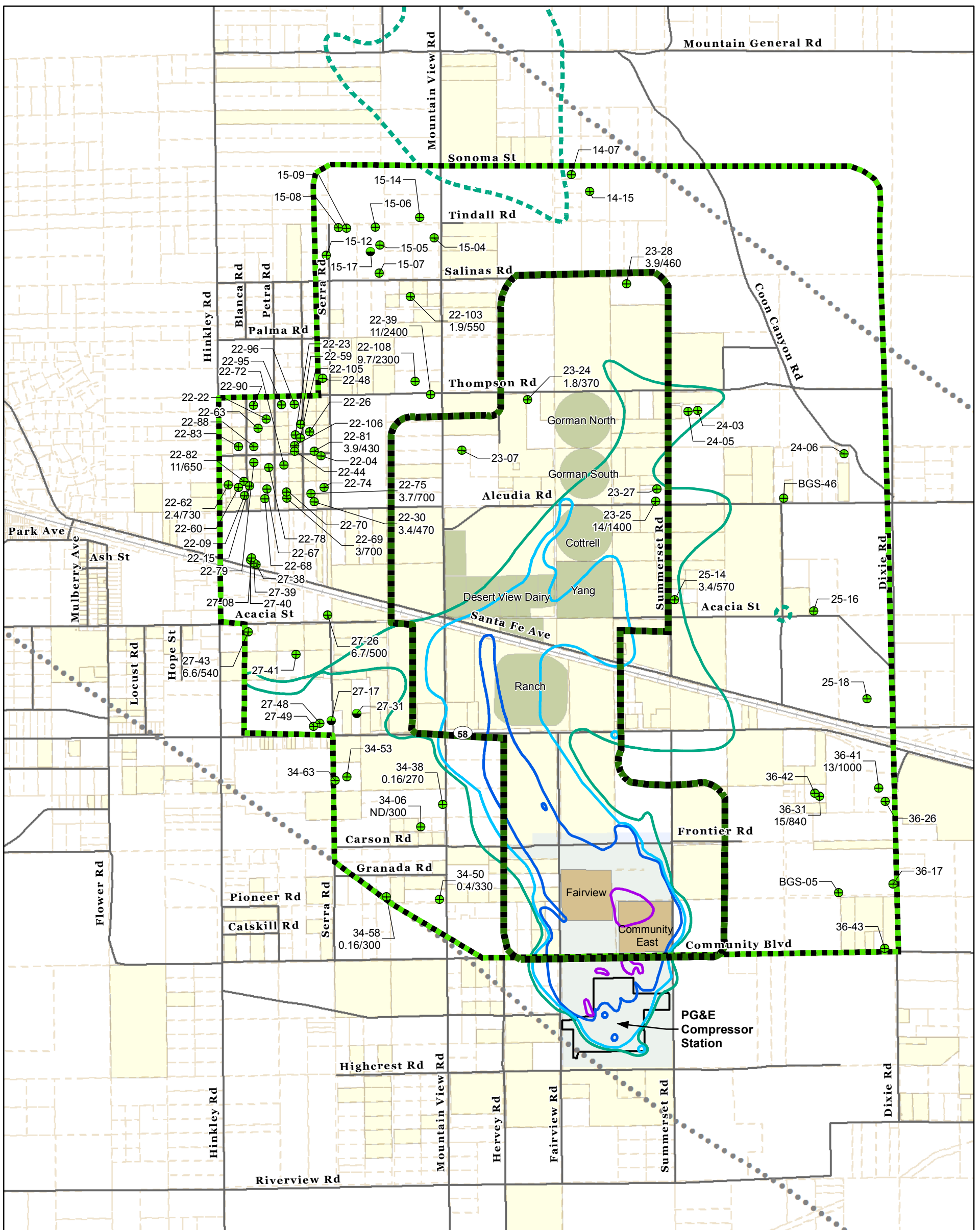
Notes:

- 1) The California MCL for uranium is 20 pCi/L
- 2) The California MCL for gross alpha is 15 pCi/L
- 3) The United States Environmental Protection Agency MCL for gross beta is 50 pCi/L
- 4) The EIR domestic and agricultural wells were not included in contour development. Wells posted without data were not sampled during the reporting period.

Cr(VI) = hexavalent chromium
 Cr(T) = total dissolved chromium
 EIR = Environmental Impact Report
 MCL = Maximum Contaminant Level
 pCi/L = pico curies per liter
 µg/L = micrograms per liter



**FIGURE 5-7
 DISSOLVED URANIUM, GROSS ALPHA,
 AND GROSS BETA CONCENTRATIONS
 (SHALLOW ZONE OF THE UPPER
 AQUIFER)**
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



LEGEND

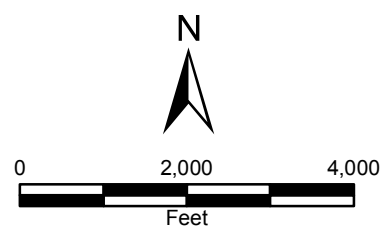
- Agricultural Supply Well
- ⊕ Domestic Supply Well
- Approximate outline of Cr(VI) or Cr(T) in Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- Approximate 1,000 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- - - Approximate location of fault trace is inferred and there is no surface expression (Stamos et al., 2001)
- County Parcels
- PG&E-Owned Property
- In Situ Reactive Zone
- Existing ATU
- Proposed ATU
- Pre-Remediation Sampling Area for WTR-MM-2b (EIR Domestic and Agricultural Supply Well Agricultural Byproducts Sampling Area)
- During Remediation Sampling Area for WTR-MM-2b (EIR Domestic and Agricultural Supply Well Agricultural Byproducts Sampling Area)

Well ID: 22-103
Nitrate/TDS: 1.9/550 (concentrations in mg/L)

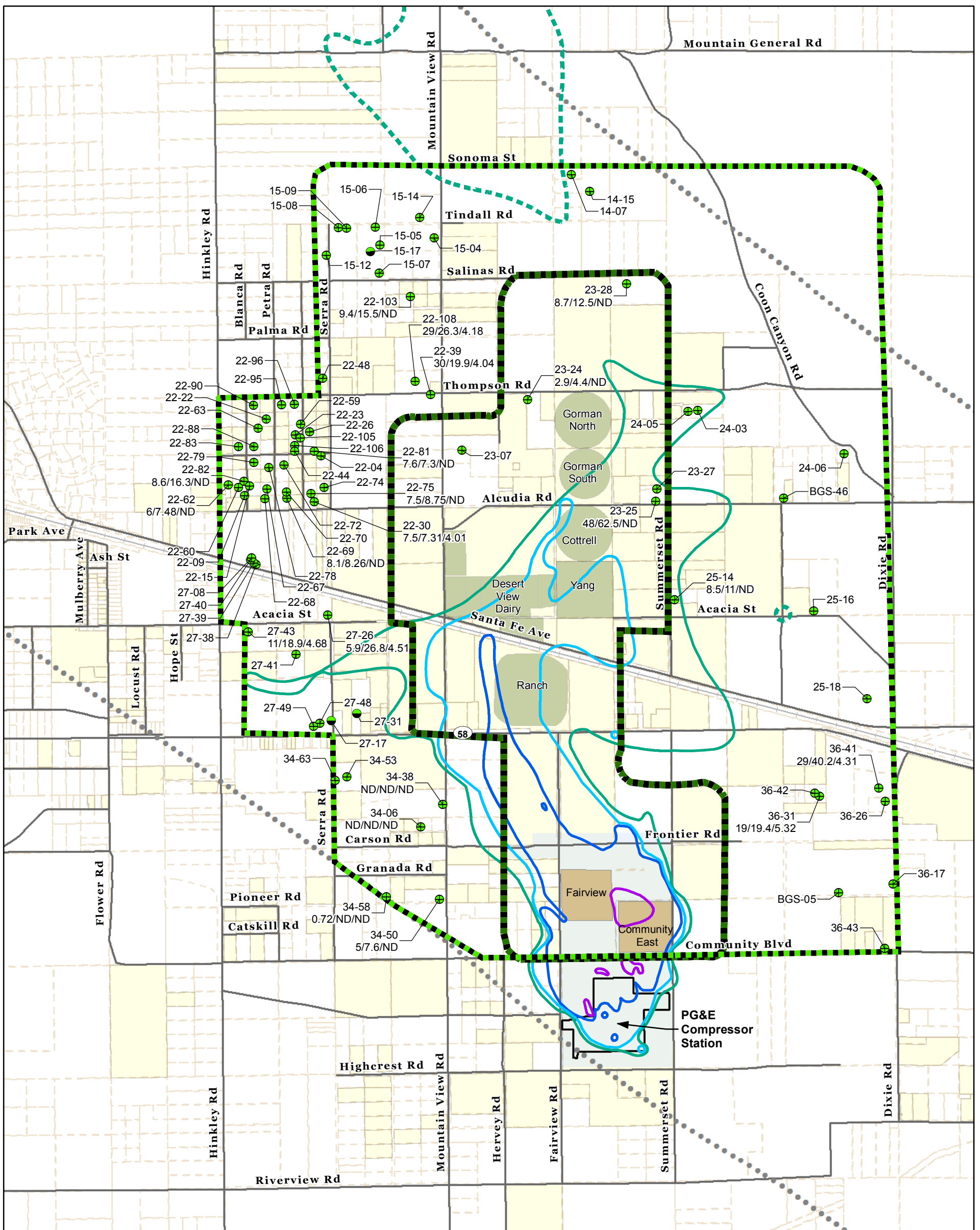
NOTES:

1. Only domestic and agricultural supply wells requiring EIR mitigation measure WTR-MM-2b sampling are shown. Not all of these wells were sampled during the current reporting period.
2. No potentially affected domestic or agricultural supply wells, or potentially affected supply well areas were identified.

µg/L = micrograms per liter
 mg/L = milligrams per liter
 ATU = Agricultural Treatment Unit
 Cr(VI) = hexavalent chromium
 Cr(T) = total dissolved chromium
 TDS = total dissolved solids
 EIR = Environmental Impact Report



**FIGURE 6-2
 PRE-REMEDIATION
 NITRATE (AS NITROGEN) AND
 TOTAL DISSOLVED SOLIDS RESULTS
 FOR DOMESTIC AND AGRICULTURAL
 SUPPLY WELLS**
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
 PACIFIC GAS AND ELECTRIC COMPANY
 HINKLEY COMPRESSOR STATION
 HINKLEY, CALIFORNIA



LEGEND

- Agricultural Supply Well
- ⊕ Domestic Supply Well
- Approximate outline of Cr(VI) or Cr(T) in Upper Aquifer exceeding values of 3.1 and 3.2 µg/L, respectively, Third Quarter 2014 (Dashed where inferred)
- Approximate 10 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- Approximate 50 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- Approximate 1,000 µg/L outline of Cr(VI) or Cr(T) concentrations in Upper Aquifer, Third Quarter 2014
- ⋯ Approximate location of fault trace is inferred and there is no surface expression (Stamos et al., 2001)
- County Parcels
- PG&E-Owned Property
- In Situ Reactive Zone
- Existing ATU
- Proposed ATU
- Pre-Remediation Sampling Area for WTR-MM-2b (EIR Domestic and Agricultural Supply Well Agricultural Byproducts Sampling Area)
- During Remediation Sampling Area for WTR-MM-2b (EIR Domestic and Agricultural Supply Well Agricultural Byproducts Sampling Area)

Well ID: 22-75
Dissolved Uranium/Gross Alpha/Gross Beta: 7.5/8.75/ND (concentrations in pCi/L)

NOTES:

1. Only domestic and agricultural supply wells requiring EIR mitigation measure WTR-MM-2b sampling are shown. Not all of these wells were sampled during the current reporting period.
2. No potentially affected domestic or agricultural supply wells, or potentially affected supply well areas were identified.

µg/L = micrograms per liter
 pCi/L = picocuries per liter
 ATU = Agricultural Treatment Unit
 Cr(VI) = hexavalent chromium
 Cr(T) = total dissolved chromium
 EIR = Environmental Impact Report
 ND = not detected at laboratory reporting limit

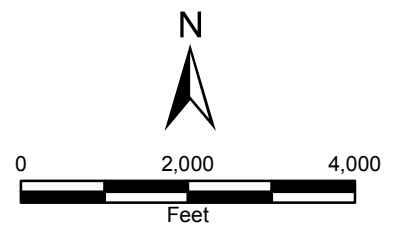
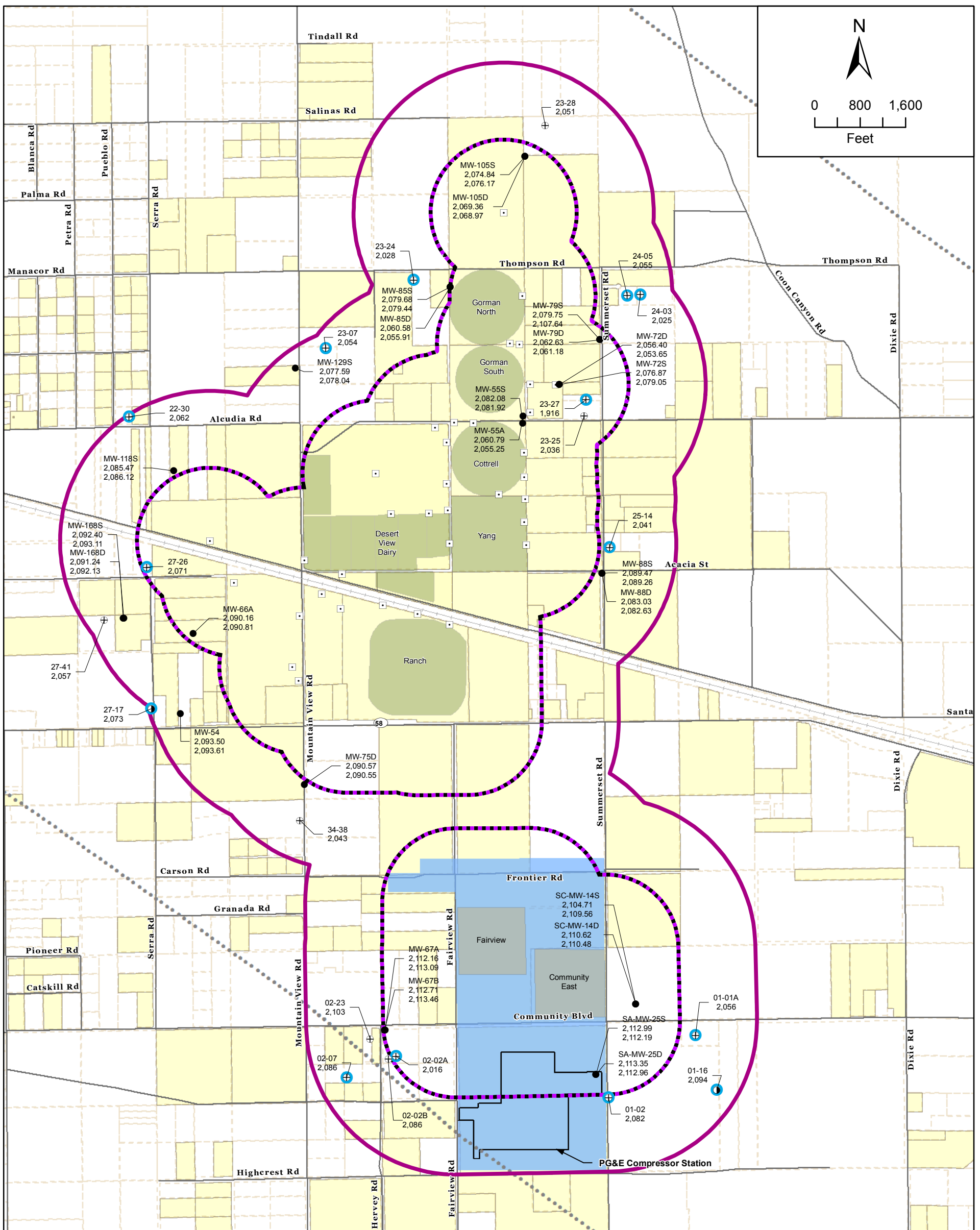


FIGURE 6-3
PRE-REMEDIATION
DISSOLVED URANIUM, GROSS ALPHA,
AND GROSS BETA RESULTS FOR
DOMESTIC AND AGRICULTURAL
SUPPLY WELLS
 THIRD QUARTER 2014 AGRICULTURAL
 TREATMENT UNITS MONITORING REPORT
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- ☐ Extraction Well
- ⊕ Agricultural Supply Well
- ⊕ Domestic Supply Well
- Monitoring Well
- ⊕ Private supply well construction information is available

- Initial baseline monitoring area. Monitoring will occur quarterly for a minimum of 1-year. This is the 1/2 mile area surrounding current and proposed agricultural unit extraction wells associated with EIR Mitigation Measure WTR-MM-2c.
- During remediation monitoring area. This is the 1/4 mile area surrounding the current and proposed agricultural unit extraction wells associated with EIR Mitigation Measure WTR-MM-2c.

- ⋯ Approximate location of fault trace is inferred and there is no surface expression (Stamos et al., 2001)
- In Situ Reactive Zone
- Existing ATU
- Proposed ATU
- ⋯ County parcels

01-02 Domestic or Agricultural Well ID
2,082 Trigger Level Elevation where 25% of the wetted screen depth is dry

MW-67A Monitoring Well ID
2,112.16 Reference groundwater elevation (April 1, 2013 through March 31, 2014)
2,113.09 Third Quarter 2014 Groundwater Elevation

NOTES:
1. Only domestic/agricultural wells requiring Environmental Impact Report (EIR) baseline water level monitoring are shown.
2. Groundwater levels were not obtained from the domestic supply or agricultural supply wells due to access limitations.
3. The lowest groundwater elevations obtained from monitoring wells from April 1, 2013 through March 31, 2014 were used to develop reference groundwater elevations in the areas where agricultural and domestic supply wells are present. The reference groundwater elevations at the monitoring wells and well construction information for supply wells (if known) were used to estimate the groundwater elevations at which 25% of the wetted screen depth would become dry (trigger level).

WORKS CITED:
Stamos, C.L., P. Martin, T. Nishikawa, and B.F. Cox. 2001. *Simulation of Ground-Water Flow in the Mojave River Basin, California*. U.S. Geological Survey Water-Resources Investigations Report 01-4002, Version 3. Prepared in cooperation with the Mojave Water Agency.

FIGURE 6-4
GROUNDWATER LEVEL MONITORING
FOR DRAWDOWN AT DOMESTIC AND
AGRICULTURAL SUPPLY WELLS
THIRD QUARTER 2014 AGRICULTURAL
TREATMENT UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA

Appendix A
Agricultural Treatment Unit Information

DYf]cX	5HI '9I HfUW]cb'K'Y''Jc'i a Yg'fHcHU'Jc'i a YZ[U'cbgk																					
	9LI%	9LI&	9LI'	9LI(9LI-	9LI%)	9LI%	9LI&\$	9LI&	9LI&(9LI&	9LI&*	9LI&+	9LI&	9LI' (7I%	7I&	7I'	7I(; !%F	; !&F	; !)F
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DYf]cX	5Hl '9I fUW]cb'K'Y''Jc'i a Yg'fHcHJ'Jc'i a YZ[U'cbgk																					
	9LI%	9LI&	9LI'	9LI(9LI-	9LI%)	9LI%	9LI&\$	9LI&	9LI&(9LI&	9LI&*	9LI&+	9LI&	9LI' (7I%	7I&	7I'	7I(; !%F	; !&F	; !)F
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O^>[>[>[I&I I&I I	I&I I&I J	CE&I H&I I	G&I I&I H	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
T&&[>[F&I J&I I	I&I H&I I	F&I I&I I	G&I I&I I	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
R^>[>[>[J&I I&I H	I&I F&I I	F&I G I&I J	H&I I&I J	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€

DYf]cX	5HI '9I HUU]cb'K Y''Jc'i a Yg'fHcHU'Jc'i a YZ[U'cbgk																					
	9LI%	9LI&	9LI'	9LI(9LI-	9LI%)	9LI%	9LI&\$	9LI&	9LI&(9LI&	9LI&'	9LI&+	9LI&	9LI' (7I%	7I&	7I'	7I(; !%F	; !&F	; !)F
R]'Ee	FEEIH EIJ	I EEI EEH	EEI EEI	HFG E G	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
CE**'EEe	FEE GEEFI	I EEJ EEH	EEI EEI	HFI EEH	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
U\]e\ a\]Ee	FEEI I EEI	I EEI EEe	EEI EEI	H E J EEI	EE	EE	EE	EE	I G EEI	F G EEI	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
U&f a\]Ee	J EEJ EEe	I EE EEH	F EE EEI	H EE EEI	EE	EE	EE	EE	F EE EEI	I EE EEI	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
P[e\ a\]Ee	F EE H EEI	I EE EEI G	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	I EE EEI	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
O^&\ a\]Ee	I EEI EEe	H EE EEJ	F EE EEH	G EE EEI	EE	EE	EE	EE	J I EEI	I H EEI	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
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o'ai' a\]Ee	I EEI EEe	EEJ EEe	F EE EEI	G EE EEI	EE	EE	EE	EE	I EE EE	I EE EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
T a&EEe	I EEI EEe	I EEJ EEe	EE EE EE	H EE EE	EE	EE	EE	EE	I EE EE	I EE EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
Q] a&EEe	I EE EEI	I EE EEI	F EE EEI	G EE EEI	EE	EE	EE	EE	F EE EEI	H EE EEI	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE
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R]^EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
R]'EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
CE**'EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
U\]e\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
U&f a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
P[e\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
O^&\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
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o'ai' a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
T a&EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
Q] a&EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
T a&EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
R]^EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
R]'EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
CE**'EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
U\]e\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
U&f a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
P[e\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
O^&\ a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
R e] a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
o'ai' a\]Ee	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
T a&EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
Q] a&EEe	I EEI EEI	I EEJ EEe	EE EE EE	G EE EEI	EE	EE	EE	EE	F EE EEI	G EE EEI	I EE EEI	EE	EE	EE	EE	I EE EE	F EE EE	H EE EE	I EE EE	F EE EE	I EE EE	H EE EE
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DYf]cX	5HI '9I fUW]cb'K'Y''Jc'i a Yg'fHcU'Jc'i a YZ[U'cbgk'fW'bh]bi YXL											5HI '8]gW U[YFUHg'				
	9LI' %	9LI' &	9LI' '	9LI')	M%	M' '	≠I%	≠I&	≠I'	9LI&'	9LI' \$'	8J8'6ccghYf' GHU]cb	7chfY'	; cfa Ub	FUbW	Mub['
U\]e\ à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	FbH'ÉJF	☐	☐	☐	☐
U&f à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Gé]éèi]i	☐	☐	☐	☐
P[ç\ à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fé]i]ÉGH	☐	☐	☐	☐
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Rè] à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
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Q]àé	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
T àé	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
R) ^é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
R] é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
CE''•é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
U\]e\ à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
U&f à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
P[ç\ à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
Ô^&\ à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
Rè] à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
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T&&é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
Q]àé	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
T àé	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
R) ^é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
R] é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
CE''•é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	▷CE	☐	☐	☐	☐
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Rè] à\]é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Ié]i]ÉG	☐	☐	☐	☐
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R) ^é	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	F]é]i]É]é	☐	☐	☐	☐
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DYf]cX	5HI '9I fUW]cb'K'Y''Jc'i a Yg'fHcH'Jc'i a YZ[U'cbgk'fW'cb]bi YXL											5HI '8]gW U[YFUH'g'				
	9LI' %	9LI' &	9LI' '	9LI')	M%	M' '	4K!%	4K!&	4K!'	9LI&'	9LI' \$'	8J8'6ccghYf' GHU]cb	7chfY'	; cfa Ub	FUbW	MUb['
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DYf]cX	5HI '9I fUW]cb'K'Y''Jc'i a Yg'fHcH'Jc'i a YZ[U'cbgk'fWb]bi YXL											5HI '8]gW U[YFUNG'				
	9LI' %	9LI' &	9LI' '	9LI')	M%	M' '	K!%	K!&	K!'	9LI&'	9LI' \$'	8J8'6ccghYf' GHU]cb	7chfY'	; cfa Ub	FubW	Mub['
R]' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GEH i Bi i	EE	EE	EE	EE
CE**' d' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GFH Fi EGH	EE	EE	EE	EE
U\] e\ a\] f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GF Bi J Bi J	EE	EE	EE	EE
U&f a\] f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	FJ Bi J Bi G	EE	EE	EE	EE
P[f' a\] f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	GEH i i EG	EE	EE	EE	EE
O^&\ a\] f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	FGH i i EG	EE	EE	EE	EE
Raj' ad' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	i EG EG	EE	EE	EE	EE
o'ai' ad' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	FEGH FEGH	EE	EE	EE	EE
T ad' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	Fi Bi i EG	EE	i EG EG	EE	EE
Q] a' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	Fi Bi J Bi i	EE	FGH FEGH	EE	EE
T ad' f' e	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	EE	Fi EG EG	Fi J EG	J Bi EG	EE	EE
R]^ f' e	EE	EE	EE	EE	EE	EE	i EG EG	i EG EG	FFJ EG	EE	EE	GEH FEGH	FFH EG	FEGH EG	i EG EG	EE
R]' f' e	EE	EE	EE	EE	EE	EE	FEGH EG	EG EG	G EG	EE	EE	G Bi EG	i EG EG	Fi Bi J EG	i EG EG	EE
CE**' d' e	EE	EE	EE	EE	EE	EE	i EG EG	i EG EG	FEGH	EE	EE	GEH FEGH	i EG EG	FFH FEGH	J EG EG	EE
U\] e\ a\] f' e	EE	EE	EE	EE	EE	EE	FEGH EG	FEGH EG	FEGH	EE	EE	G Bi FEGH	i EG EG	FGH i EG	EG EG	EE
U&f a\] f' e	EE	EE	EE	EE	EE	EE	H EG EG	H EG EG	EG	EE	EE	G Bi i EG	i EG EG	FGH EG	i EG EG	EE
P[f' a\] f' e	EE	EE	EE	EE	EE	EE	FEGH EG	FEGH EG	EG	EE	EE	G Bi EG	FEGH EG	i EG EG	EG EG	EE
O^&\ a\] f' e	EE	EE	EE	EE	EE	EE	FEGH EG	FEGH EG	i EG	EE	EE	FEGH EG	FEGH EG	H EG EG	EG H EG	EE
Raj' ad' f' e	EE	EE	EE	EE	EE	EE	i EG EG	i EG EG	EG	EE	EE	Fi EG EG	i EG EG	i EG EG	FEGH EG	EE
o'ai' ad' f' e	EE	EE	EE	EE	EE	EE	FEGH EG	FEGH EG	H EG	EE	EE	FEGH EG	i EG EG	i EG EG	H EG EG	EE
T ad' f' e	EE	EE	EE	EE	EE	EE	H EG EG	EG EG	EG	EE	EE	Fi EG EG	FGH EG	FFH EG	i EG EG	EE
Q] a' f' e	EE	EE	EE	EE	EE	EE	EG EG	FEGH EG	EG	EE	EE	Fi EG EG	FEGH EG	FFH EG	i EG EG	EE
T ad' f' e	i EG EG	FGH EG	FFH EG	EE	EE	EE	i EG EG	i EG EG	EG	G EG	i EG EG	FGH EG	FEGH EG	FGH EG	FFH EG	EE
R]^ f' e	FG EG	H EG EG	H EG EG	EE	EE	EE	i EG EG	i EG EG	EG	i EG EG	i EG EG	G Bi EG	FFH EG	Fi EG EG	FFH EG	EE
R]' f' e	J EG EG	i EG EG	G EG EG	EE	EE	EE	i EG EG	i EG EG	FEGH	i EG EG	i EG EG	Fi EG EG	J EG EG	FEGH EG	FEGH EG	EE
CE**' d' e	G EG EG	H EG EG	FEGH EG	EE	EE	EE	i EG EG	i EG EG	EG	i EG EG	i EG EG	GEH EG	J EG EG	FGH EG	FFH EG	EE
U\] e\ a\] f' e	H EG EG	G EG EG	G EG EG	EE	EE	EE	i EG EG	H EG EG	EG	i EG EG	i EG EG	G Bi EG	i EG EG	FFH EG	J EG EG	EE
U&f a\] f' e	H EG EG	H EG EG	H EG EG	EE	EE	EE	EG EG	EG EG	EG	i EG EG	i EG EG	G Bi EG	FGH EG	FFH EG	i EG EG	EE
P[f' a\] f' e	i EG EG	H EG EG	G EG EG	EE	EE	EE	i EG EG	i EG EG	EG	i EG EG	i EG EG	FGH EG	EG EG	Fi EG EG	FGH EG	EE
O^&\ a\] f' e	G EG EG	H EG EG	H EG EG	EE	EE	EE	H EG EG	FEGH EG	EG	FEGH EG	Fi EG EG	GEH EG	i EG EG	FEGH EG	i EG EG	EE
Raj' ad' f' e	H EG EG	H EG EG	EG EG	EE	EE	EE	i EG EG	EG	EG	EG	EG	Fi EG EG	FEGH EG	FFH EG	i EG EG	EE
o'ai' ad' f' e	G EG EG	FFH EG	EG	EE	EE	EE	EG EG	i EG EG	EG	EG	EG	Fi EG EG	i EG EG	J EG EG	H EG EG	EE
T ad' f' e	G EG EG	EG	H EG EG	EE	EE	EE	H EG EG	EG	EG	EG	EG	Fi EG EG	i EG EG	Fi EG EG	H EG EG	EE
Q] a' f' e	H EG EG	EG EG	i EG EG	i EG EG	EE	EE	H EG EG	FEGH EG	EG	EG	EG	Fi EG EG	EG EG	FEGH EG	i EG EG	H EG EG
T ad' f' e	i EG EG	i EG EG	i EG EG	i EG EG	EE	EE	i EG EG	i EG EG	EG	EG	EG	FEGH EG	i EG EG	FGH EG	FEGH EG	i EG EG

Appendix B
Groundwater Field Parameters and
Groundwater Levels

Table B-1

Groundwater Field Parameters and Aquifer Characteristics for Monitoring and Extraction Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	Depth to Water (ft AMSL)	Depth to Water (ft BGS)	pH	Specific Conductance (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (deg C)	Salinity (%)	Total Dissolved Solids (TDS) (mg/L)	ORP (mV)
Cottrell (OU2)											
MW-55A	07/23/2014	2,055.25	109.55	7.76	865	4	0.23	23.85	0.042	511	-161.1
MW-55S	07/23/2014	2,081.92	82.94	6.59	5,515	31	4.01	23.51	0.298	3,582	-15.7
MW-68D	07/18/2014	2,046.72	120.70	6.81	2,645	15	4.09	24.20	0.137	1,720	48.2
MW-68S	07/18/2014	2,081.80	85.62	6.56	5,201	13	2.10	26.90	0.270	3,260	55.0
Desert View Dairy (OU2)											
DW-02	07/22/2014	2,086.58	78.42	6.54	4,379	6	2.59	21.50	0.227	3,301	145.2
MW-28B	07/25/2014	2,084.30	90.60	7.06	1,430	4	6.81	21.90	0.080	1,091	37.3
MW-29	07/21/2014	2,087.63	81.57	6.69	4,887	4	5.29	21.51	0.263	3,170	83.2
MW-31	07/17/2014	2,073.10	97.22	6.61	4,143	5	6.00	20.40	0.220	2,690	-18.0
MW-42B1	07/25/2014	2,081.39	91.81	6.80	1,980	4	6.62	22.38	0.101	1,280	142.0
MW-42B2	07/25/2014	2,081.43	91.72	6.72	1,796	6	6.21	21.79	0.091	1,160	147.1
MW-63	07/21/2014	2,085.27	80.37	5.88 FQ	3,762	9	5.22	23.32	0.198	2,447	79.9
MW-71D	07/18/2014	2,039.97	120.03	6.91	3,699	7	3.94	23.20	0.195	2,405	90.1
MW-71S	07/18/2014	2,077.82	82.18	6.56	7,027	7	7.00	23.20	0.387	4,576	129.7
MW-83D	07/21/2014	2,082.06	84.41	5.83 FQ	4,586	28	1.29	24.36	0.245	2,984	38.5
MW-83S	07/21/2014	2,082.28	84.19	5.94 FQ	4,540	28	2.41	26.84	0.241	2,945	35.3
MW-89D	07/24/2014	2,059.45	98.15	6.89	1,774	11	3.87	25.16	0.083	1,180	-15.9
MW-89S	07/24/2014	2,080.37	77.23	5.9 FQ	5,086	27	8.04	25.10	0.273	3,307	30.0
	09/04/2014	2,079.66	77.94	6.17	5,010	23	4.24	24.01	0.253	2,949	21.8
MW-127S1	07/22/2014	2,077.68	81.89	6.40	5,321	23	4.90	28.38	0.285	3,450	78.5
MW-127S2	07/22/2014	2,078.01	81.56	6.70	3,851	11	6.51	25.40	0.203	2,515	62.3
MW-170S	07/21/2014	2,084.41	80.40	5.99 FQ	4,702	46	9.05	23.14	0.252	3,061	88.9
Gorman (OU2)											
MW-70D	07/24/2014	2,051.46	107.54	6.99	3,184	5	3.64	24.60	0.174	2,201	80.3
MW-70S	07/24/2014	2,080.04	78.96	6.50	6,537	6	3.60	23.30	0.357	4,244	93.6
MW-84D	07/22/2014	2,065.17	91.85	8.09	1,950	44.9	0.19	21.60	0.102	1,289	219.6
MW-84S	07/22/2014	2,078.71	78.31	7.34	5,589	15.1	7.10	20.40	0.306	3,655	281.7
MW-85D	07/24/2014	2,055.91	101.36	7.71	434	18	0.10	24.70	0.021	282	-163.7
MW-85S	07/24/2014	2,079.44	77.83	6.87	3,652	3	7.14	23.30	0.192	2,379	91.3
MW-86D	07/24/2014	2,070.69	97.15	7.45	725	3	6.29	24.10	0.038	500	12.6
MW-86S	07/24/2014	2,082.62	85.21	6.84	1,958	4	8.17	25.80	0.100	1,280	87.8
MW-105D	07/22/2014	2,068.97	85.68	7.98	529	7	0.05	24.50	0.025	344	-43.2
MW-105S	07/22/2014	2,076.39	78.25	7.09	1,164	1	7.29	23.40	0.058	754	182.8
	09/04/2014	2,076.17	78.47	7.42	1,085	20	5.46	23.71	0.053	761	131.8

Table B-1

Groundwater Field Parameters and Aquifer Characteristics for Monitoring and Extraction Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	Depth to Water (ft AMSL)	Depth to Water (ft BGS)	pH	Specific Conductance (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (deg C)	Salinity (%)	Total Dissolved Solids (TDS) (mg/L)	ORP (mV)
MW-206S	07/10/2014	2,079.65	77.07	6.83	8,699	47	9.66	25.77	0.484	5,654	110.1
Ranch (OU2) ^a											
MW-14B	07/18/2014	2,088.32	93.38	7.30	1,322	4	3.40	21.20	0.056	600	14.3
MW-14S	08/06/2014	2,090.89	90.62	7.08	1,983	6	7.19	22.90	0.101	1,290	96.4
MW-22B	07/25/2014	2,082.76	91.24	7.31	1,601	4	6.85	22.30	0.080	1,253	30.4
MW-27A	07/23/2014	2,092.64	90.06	6.88	1,714	3	6.51	22.91	0.087	1,110	91.6
MW-27B	07/23/2014	2,088.78	93.92	6.85	1,414	3	4.97	21.43	0.071	910	85.0
MW-56	07/22/2014	2,081.58	93.22	6.73	1,607	3	4.81	21.91	0.081	1,040	146.6
Yang (OU2)											
MW-21A	07/17/2014	2,075.02	95.28	6.48	4,358	5	6.01	21.20	23.2 FQ	2,820	22.7
MW-21B1	07/17/2014	2,069.65	100.84	6.78	2,146	4	7.33	21.10	0.110	1,390	12.2
MW-32B1	07/23/2014	2,062.38	107.92	6.81	2,189	1.57	7.02	20.40	0.116	1,464	217.4
MW-32S	07/23/2014	2,084.94	84.93	6.43	3,852	33.6	4.00	23.80	0.211	2,632	231.7
MW-49A	07/22/2014	2,094.44	83.70	6.86	1,637	3	5.03	21.29	0.083	1,060	96.5
MW-49B	07/22/2014	2,093.39	84.71	6.78	1,681	3	3.50	21.24	0.085	1,090	99.1
MW-88D	07/21/2014	2,082.63	89.54	7.28	1,347	9	0.08	23.40	0.067	878	-83.2
MW-88S	07/21/2014	2,089.26	82.91	6.80	1,875	15	5.64	27.30	0.095	1,215	79.3
Additional Wells Sampled to Develop Baseline Water Quality Conditions											
CA-MW-101	07/07/2014	2,097.12	99.43	7.03	1,210	8	0.16	25.75	0.060	788	-151.0
CA-MW-103	07/11/2014	2,099.94	95.08	7.13	1,295	2	0.32	24.47	0.064	840	-148.2
CA-MW-103D	07/11/2014	2,102.70	92.60	7.22	1,315	3	0.71	23.27	0.066	850	-105.6
	07/11/2014	2,102.70	92.60	7.22	1,315	3	0.71	23.27	0.066	850	-105.6
	07/11/2014	2,102.70	92.60	7.22	1,315	3	0.71	23.27	0.066	850	-105.6
CA-MW-104D	07/11/2014	2,109.80	83.19	7.15	1,226	3	0.73	23.11	0.061	790	-160.3
CA-MW-104S	07/11/2014	2,101.09	91.90	7.15	1,138	6	0.95	25.14	0.050	740	-134.6
CA-MW-105	07/22/2014	2,100.58	90.26	6.97	1,303	9	0.69	23.92	0.065	847	-109.5
CA-MW-105D	07/22/2014	2,105.93	85.29	6.95	1,126	16	0.43	22.41	0.056	731	-107.7
	07/22/2014	2,105.93	85.29	6.95	1,126	16	0.43	22.41	0.056	731	-107.7
	07/22/2014	2,105.93	85.29	6.95	1,126	16	0.43	22.41	0.056	731	-107.7
CA-MW-106S	07/22/2014	2,100.84	87.59	6.99	1,223	4	0.11	23.34	0.061	794	-178.8
CA-MW-107D	07/21/2014	2,103.07	84.27	7.05	1,277	5	0.99	22.56	0.064	829	-103.7
CA-MW-107S	07/21/2014	2,101.08	86.26	7.00	1,270	9	0.07	23.94	0.063	824	-157.2
CA-MW-601	08/04/2014	2,087.34	94.88	6.66	1,677	4	3.88 FQ	23.90	0.084	1,092	-179.2
CA-MW-603	08/04/2014	2,088.36	92.91	6.30	3,345	20	3.06 FQ	24.10	0.182	2,140	-230.5
DW-01	07/22/2014	2,081.19	92.01	6.74	3,561	1.81	6.79	22.32	0.188	2,321	106.0

Table B-1

Groundwater Field Parameters and Aquifer Characteristics for Monitoring and Extraction Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	Depth to Water (ft AMSL)	Depth to Water (ft BGS)	pH	Specific Conductance (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (deg C)	Salinity (%)	Total Dissolved Solids (TDS) (mg/L)	ORP (mV)
DW-03	07/22/2014	2,083.26	83.54	6.55	6,257	7	6.06	22.10	0.336	4,577	93.5
EX-05	07/09/2014	nm	nm	7.43	992	7	14.91 FQ	25.28	0.049	644	47.3
EX-10	07/09/2014	2,090.52	80.93	7.45	591	8	15.79 FQ	23.87	0.029	384	81.5
EX-15	07/22/2014	nm	nm	7.43	1,437	6	7.39	19.50	0.071	910	146.7
EX-16	07/22/2014	nm	nm	7.49	1,069	5	5.96	20.91	0.050	811	101.6
EX-17	07/08/2014	2,089.68	92.29	7.71	427	8	0.06	22.80	0.020	270	-130.1
EX-20	07/22/2014	nm	nm	7.19	1,078	3	7.04	22.19	0.053	700	101.4
EX-21	08/06/2014	nm	nm	7.53	655	1	0.55	22.10	0.028	370	-171.4
EX-22	08/06/2014	nm	nm	7.32	1,448	1	4.62	21.90	0.073	490	41.3
EX-29	07/22/2014	nm	nm	7.31	1,311	2	7.09	21.81	0.071	731	69.4
EX-30	07/22/2014	nm	nm	7.08	1,491	2	7.31	21.46	0.073	949	100.1
MW-09	08/06/2014	2,089.51	90.09	7.01	1,344	1	5.59	21.10	0.065	870	110.8
MW-10	08/06/2014	2,085.33	92.77	6.82	1,602	1	4.04	20.70	0.081	1,040	100.4
MW-11A	07/21/2014	2,106.56	84.54	7.13	1,375	5	0.95	22.50	0.068	964	-77.2
MW-11B	07/21/2014	2,108.63	82.17	7.22	975	7	4.31	21.50	0.047	540	66.2
MW-14A	08/06/2014	2,088.87	92.93	6.98	1,623	1	2.78	21.10	0.083	1,050	112.8
MW-16	07/21/2014	2,105.42	86.58	6.90	1,845	6	0.92	22.00	0.094	1,209	89.4
MW-21B	07/17/2014	2,075.01	94.99	7.66	1,111	5	0.38	22.10	0.055	720	-153.1
MW-24B	07/25/2014	2,084.79	92.21	7.18	1,568	4	6.03	22.10	0.087	1,124	23.7
MW-30B1	07/17/2014	2,076.77	95.63	6.65	2,594	5	5.14	21.60	0.134	1,680	51.7
MW-30B2	07/17/2014	2,077.64	94.86	6.69	1,589	4	3.40	23.10	0.080	1,030	-7.1
MW-32B2	07/23/2014	2,066.47	103.53	6.95	1,411	4.2	5.16	20.50	0.064	915	191.3
MW-36	07/14/2014	2,113.19	92.11	7.22	867	5	9.63	24.00	0.043	560	-47.5
MW-43	07/17/2014	2,068.17	101.29	6.67	3,922	4	6.68	21.00	0.207	2,520	-36.8
MW-50B	07/23/2014	2,082.01	91.95	6.82	1,358	5	3.91	23.50	0.064	800	89.1
MW-50S	07/23/2014	2,087.49	86.27	6.92	1,802	10	6.35	23.91	0.091	1,172	-0.3
MW-55B	07/23/2014	2,075.48	89.32	7.51	563	7	0.12	23.34	0.027	366	-206.1
MW-62A	07/21/2014	2,054.51	112.20	6.36	2,903	3	3.09	24.20	0.151	1,888	125.0
MW-69D	07/18/2014	2,060.53	101.93	6.81	3,419	6	2.14	25.00	0.180	2,220	29.4
MW-69S	07/18/2014	2,080.48	81.98	6.87	5,366	37	2.77	23.60	0.280	3,352	63.4
MW-72D	07/18/2014	2,053.65	107.77	7.77	710	12	0.06	25.70	0.034	455	-131.6
MW-72S	07/18/2014	2,079.05	82.36	6.80	2,036	7	5.69	23.50	0.104	1,319	39.5
MW-79D	07/18/2014	2,061.18	99.07	7.96	424	4	0.89	24.28	0.020	270	-99.6
MW-79S	07/18/2014	2,107.64	52.56	6.89	1,738	37	6.67	2418 FQ	0.088	1,130	-98.7
MW-80D	07/24/2014	2,067.79	92.55	7.50	810	4	6.51	24.40	0.040	526	113.8
MW-80S	07/24/2014	2,079.59	80.75	6.81	2,056	7	1.42	28.10	0.104	1,339	72.9

Table B-1

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	Depth to Water (ft AMSL)	Depth to Water (ft BGS)	pH	Specific Conductance (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (deg C)	Salinity (%)	Total Dissolved Solids (TDS) (mg/L)	ORP (mV)
MW-87D	07/23/2014	2,071.89	95.09	6.72	1,435	11	3.04	23.30	0.082	1,075	46.1
MW-87S	07/23/2014	2,085.88	81.10	7.41	1,863	11	1.07	22.80	0.095	1,214	53.4
MW-101D	07/09/2014	2,085.27	87.14	7.31	1,904	12	4.01	24.01	0.097	1,210	76.2
MW-107D	07/22/2014	2,075.25	80.62	9.64	460	16	0.13	24.90	0.022	299	-182.5
MW-107S	07/22/2014	2,078.95	76.92	7.26	1,317	6	4.53	23.40	0.066	858	-24.7
MW-108D	07/23/2014	2,085.10	91.09	7.02	1,529	4	6.13	23.86	0.077	990	125.2
MW-108S	07/23/2014	2,085.22	90.97	6.94	1,677	5	6.54	23.77	0.085	1,090	133.3
MW-124D	07/15/2014	2,068.22	83.20	8.71	761	5	0.82	22.50	0.033	419	35.3
MW-124S1	07/15/2014	2,074.36	77.54	7.52	716	6	3.70	22.60	0.035	469	65.7
MW-178D	07/15/2014	2,102.22	99.07	6.83	1,540	9	4.83	29.10	0.077	1,000	103.4
MW-178S	07/15/2014	2,102.71	98.51	6.80	1,279	1	6.50	23.70	0.064	832	107.4
MW-180RD	07/18/2014	2,103.81	91.41	6.61	798	42	4.55	23.79	0.039	519	65.3
MW-180RS	07/18/2014	2,104.00	91.19	6.64	973	27	3.89	26.05	0.047	631	65.0
SA-MW-06D	08/06/2014	2,113.15	90.26	6.70	647	3.81	0.36	23.00	0.031	422	142.9
SA-MW-06S	08/06/2014	2,111.43	91.98	7.14	867	12.6	6.98	23.00	0.043	565	134.9
SA-MW-10D	08/06/2014	2,110.41	86.36	7.10	1,249	3.25	5.96	22.20	0.062	806	156.2
SA-MW-10S	08/06/2014	2,110.32	86.45	6.97	1,250	3.59	2.08	22.10	0.062	812	142.2
SA-MW-11D	07/21/2014	2,112.92	89.44	7.65	603	6	7.83	21.40	0.028	406	-35.1
SA-MW-11S	07/21/2014	2,109.88	92.48	7.58	1,352	43	7.81	22.40	0.067	862	22.0
SA-MW-12D	07/07/2014	2,112.84	86.57	7.61	623	2	8.15	21.00	0.030	383	-52.4
SA-MW-12S	07/07/2014	2,108.49	90.92	7.03	894	16	7.22	21.50	0.045	588	-99.1
SA-MW-14D	07/07/2014	2,109.06	85.76	7.11	1,199	44	1.70	22.00	0.060	761	60.7
SA-MW-14S	07/07/2014	2,108.44	86.38	7.04	1,211	10	6.30	22.10	0.069	770	47.5
SA-MW-15D	07/07/2014	2,109.33	82.82	7.10	1,168	36	3.15	24.70	0.058	758	-4.0
SA-MW-15S	07/10/2014	2,108.57	83.58	683 FQ	1,296	3	4.74	22.81	0.065	840	66.2
SC-MW-01D	08/07/2014	2,110.36	86.09	6.78	1,148	13	8.43	13.70	0.058	741	65.0
SC-MW-01S	08/07/2014	2,110.25	86.20	6.75	914	24	9.17	14.10	0.045	598	720.0
SC-MW-03D	08/07/2014	2,106.41	86.92	7.12	601	21	4.43	14.10	0.030	397	11.3
SC-MW-03S	08/07/2014	2,106.84	86.49	6.86	947	45	8.02	15.20	0.049	617	42.5
SC-MW-12D	08/04/2014	2,112.97	85.67	7.29	476	13	0.12	23.20	0.023	300	-112.0
SC-MW-12S	08/04/2014	2,106.74	91.90	7.02	1,579	31	6.36	24.70	0.080	1,030	126.7
SC-MW-21S	07/08/2014	2,106.72	89.51	7.21	1,440	43	5.70	22.40	0.070	924	78.6
SC-MW-22S	07/08/2014	2,107.09	87.83	7.57	1,281	16	1.11	21.40	0.063	815	-71.6
SC-MW-23S	07/08/2014	2,107.27	85.39	7.59	1,303	45.7	0.75	19.50	0.066	845	56.3
SC-MW-26D	07/18/2014	2,106.69	82.97	6.80	913	41	4.56	22.96	0.045	595	68.3
SC-MW-26S	07/18/2014	2,106.23	83.43	5.96 FQ	1,159	17	0.37	22.42	0.060	748	-39.0

Table B-1

Groundwater Field Parameters and Aquifer Characteristics for Monitoring and Extraction Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	Depth to Water (ft AMSL)	Depth to Water (ft BGS)	pH	Specific Conductance (uS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (deg C)	Salinity (%)	Total Dissolved Solids (TDS) (mg/L)	ORP (mV)
SC-MW-32D	07/09/2014	2,107.25	87.05	6.41	441	39	0.64	23.15	0.021	280	11.6
SC-MW-32S	07/09/2014	2,104.15	90.15	7.02	1,341	13	0.96	24.20	0.067	870	-53.4
SC-MW-38D	07/09/2014	2,103.02	86.40	6.83	1,229	15	6.87	21.03	0.062	800	62.2
SC-MW-38S	07/09/2014	2,104.49	84.92	7.23	1,004	38	7.26	21.68	0.050	630	88.2
X-10	07/15/2014	2,104.26	85.34	6.51	1,862	9	4.94	21.75	0.095	1,210	62.0
X-11	07/15/2014	2,106.23	84.77	6.31	1,441	3	0.77	23.84	0.072	937	140.2
X-12	07/15/2014	2,103.80	86.20	6.60	1,374	5	6.11	22.14	0.069	893	102.5
X-13	07/15/2014	2,103.79	85.11	7.01	1,066	4	6.79	22.29	0.053	694	47.0
X-16	07/15/2014	2,103.96	84.04	6.46	1,391	3	1.93	21.70	0.071	900	46.4

^a Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2. Therefore, the Ranch ATU is considered to be in OU2.

uS/cm	microsiemens per centimeter
%	mass percent
ASML	above mean sea level
BGS	below ground surface
deg C	degrees celcius
ft	feet
FQ	field measurement qualified as questionable due to reading outside expected range
mg/L	milligrams per liter
mV	millivolts
nm	parameter was not measured
NTU	nephelometric turbidity units
ORP	oxidation reduction potential
OU	operable unit

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Cottrell (OU2)						
MW-55A	Deep Zone Upper Aquifer	01/16/2012	10:32	2167.28	86.92	2080.36
		04/06/2012	12:27	2167.28	101.40	2065.88
		07/12/2012	11:23	2167.28	109.19	2058.09
		10/09/2012	15:02	2167.28	106.75	2060.53
		01/17/2013	10:18	2167.28	97.45	2069.83
		04/10/2013	11:30	2167.28	94.11	2073.17
		07/31/2013	13:29	2167.28	106.49	2060.79
		10/14/2013	12:37	2167.28	99.68	2067.60
		01/22/2014	08:38	2167.28	95.51	2071.77
		04/16/2014	14:59	2167.28	98.90	2068.38
		07/23/2014	08:26	2167.28	112.03	2055.25
MW-55S	Shallow Zone Upper Aquifer	02/03/2012	11:35	2164.43	82.75	2081.68
		04/24/2012	10:10	2164.43	82.41	2082.02
		07/31/2012	08:46	2164.43	82.05	2082.38
		10/01/2012	13:59	2164.43	82.26	2082.17
		01/17/2013	09:52	2164.43	81.85	2082.58
		04/10/2013	13:26	2164.43	79.02	2085.41
		07/15/2013	14:15	2164.43	81.00	2083.43
		10/14/2013	11:17	2164.43	82.11	2082.32
		01/15/2014	08:54	2164.43	82.35	2082.08
		04/16/2014	12:19	2164.43	81.97	2082.46
07/23/2014	14:20	2164.43	82.51	2081.92		
MW-68D	Deep Zone Upper Aquifer	01/13/2012	12:10	2166.93	96.62	2070.31
		04/09/2012	12:09	2166.93	103.13	2063.80
		07/23/2012	10:27	2166.93	104.05	2062.88
		10/17/2012	08:17	2166.93	118.39	2048.54
		01/24/2013	09:50	2166.93	100.32	2066.61
		04/16/2013	12:19	2166.93	92.90	2074.03
		07/30/2013	13:15	2166.93	112.90	2054.03
		10/16/2013	11:00	2166.93	102.75	2064.18
		01/20/2014	11:40	2166.93	93.80	2073.13
		04/11/2014	11:11	2166.93	104.21	2062.72
07/18/2014	10:51	2166.93	120.21	2046.72		
MW-68S	Shallow Zone Upper Aquifer	01/13/2012	11:40	2166.93	86.63	2080.30

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Cottrell (OU2)						
MW-68S	Shallow Zone Upper Aquifer	04/09/2012	11:00	2166.93	84.48	2082.45
		07/23/2012	11:15	2166.93	84.09	2082.84
		10/17/2012	09:06	2166.93	85.02	2081.91
		01/24/2013	10:43	2166.93	83.32	2083.61
		04/16/2013	11:45	2166.93	81.80	2085.13
		07/30/2013	12:01	2166.93	82.80	2084.13
		10/16/2013	10:20	2166.93	84.75	2082.18
		01/20/2014	10:22	2166.93	91.34	2075.59
		04/11/2014	09:49	2166.93	84.21	2082.72
		07/18/2014	10:25	2166.93	85.13	2081.80
Desert View Dairy (OU2)						
DW-02	Shallow Zone Upper Aquifer	01/12/2012	08:43	2166.48	79.41	2087.07
		04/10/2012	15:00	2166.48	78.10	2088.38
		07/23/2012	15:49	2166.48	79.41	2087.07
		10/17/2012	08:35	2166.48	81.56	2084.92
		02/01/2013	13:00	2166.48	81.72	2084.76
		04/16/2013	12:12	2166.48	77.65	2088.83
		07/31/2013	08:55	2166.48	78.78	2087.70
		10/15/2013	10:29	2166.48	79.48	2087.00
		01/24/2014	09:07	2166.48	79.22	2087.26
		04/15/2014	08:05	2166.48	77.83	2088.65
MW-127S1	Shallow Zone Upper Aquifer	01/31/2012	12:05	2159.33	82.21	2077.12
		03/13/2012	09:59	2159.33	82.08	2077.25
		03/23/2012	12:42	2159.33	82.08	2077.25
		04/26/2012	14:29	2159.33	82.15	2077.18
		05/14/2012	11:10	2159.33	82.14	2077.19
		07/30/2012	12:40	2159.33	82.33	2077.00
		08/10/2012	08:30	2159.33	82.29	2077.04
		10/11/2012	08:59	2159.33	82.50	2076.83
		11/05/2012	11:00	2159.33	82.44	2076.89
		02/01/2013	11:20	2159.33	82.23	2077.10
02/21/2013	12:03	2159.33	82.10	2077.23		
04/15/2013	13:18	2159.33	81.59	2077.74		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-127S1	Shallow Zone Upper Aquifer	07/11/2013	10:49	2159.33	81.50	2077.83
		10/11/2013	10:10	2159.33	81.56	2077.77
		01/21/2014	13:18	2159.33	81.23	2078.10
		03/06/2014	10:03	2159.33	81.24	2078.09
		04/16/2014	11:02	2159.33	81.14	2078.19
		07/22/2014	11:16	2159.33	81.65	2077.68
MW-127S2	Shallow Zone Upper Aquifer	01/31/2012	11:15	2159.41	82.48	2076.93
		03/23/2012	12:40	2159.41	82.00	2077.41
		04/26/2012	13:42	2159.41	82.05	2077.36
		05/14/2012	11:07	2159.41	82.11	2077.30
		07/30/2012	13:15	2159.41	82.20	2077.21
		08/10/2012	08:32	2159.41	82.24	2077.17
		10/11/2012	08:00	2159.41	82.51	2076.90
		11/05/2012	11:04	2159.41	82.41	2077.00
		02/01/2013	12:00	2159.41	82.32	2077.09
		02/21/2013	11:29	2159.41	82.18	2077.23
		04/15/2013	14:00	2159.41	81.60	2077.81
		07/11/2013	11:26	2159.41	81.61	2077.80
		10/11/2013	10:54	2159.41	81.62	2077.79
		01/21/2014	13:49	2159.41	81.21	2078.20
MW-170S	Shallow Zone Upper Aquifer	04/16/2014	10:23	2159.41	81.50	2077.91
		07/22/2014	10:33	2159.41	81.40	2078.01
		12/06/2012	11:30	2164.64	82.15	2082.49
		01/22/2013	09:40	2164.64	81.33	2083.31
		04/15/2013	09:48	2164.64	79.07	2085.57
		07/18/2013	09:29	2164.64	79.78	2084.86
		10/15/2013	12:12	2164.64	80.92	2083.72
		01/22/2014	13:55	2164.64	80.25	2084.39
MW-28A	Shallow Zone Upper Aquifer	04/15/2014	12:34	2164.64	79.70	2084.94
		07/21/2014	12:43	2164.64	80.23	2084.41
		01/30/2012	10:38	2177.90	87.90	2090.00
		03/23/2012	10:25	2177.90	89.21	2088.69
		04/25/2012	11:00	2177.90	89.32	2088.58
		07/24/2012	10:56	2177.90	91.34	-9999.00

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-28A	Shallow Zone Upper Aquifer	10/11/2012	12:36	2177.90	92.46	-9999.00
		01/16/2013	15:26	2177.90	91.55	-9999.00
		04/11/2013	12:08	2177.90	90.21	2087.69
		01/15/2014	12:33	2177.90	92.25	-9999.00
		04/11/2014	08:55	2177.90	91.30	-9999.00
		07/25/2014	12:00	2177.90	93.67	2084.23
MW-28B	Deep Zone Upper Aquifer	01/30/2012	11:04	2176.94	86.96	2089.98
		03/23/2012	10:27	2176.94	88.34	2088.60
		04/25/2012	11:35	2176.94	88.43	2088.51
		05/14/2012	13:35	2176.94	88.92	2088.02
		07/24/2012	11:29	2176.94	90.45	2086.49
		08/10/2012	10:07	2176.94	90.03	2086.91
		10/11/2012	13:06	2176.94	91.61	2085.33
		11/05/2012	12:00	2176.94	91.61	2085.33
		01/16/2013	15:26	2176.94	90.63	2086.31
		02/04/2013	11:46	2176.94	90.36	2086.58
		04/11/2013	13:06	2176.94	89.33	2087.61
		07/11/2013	10:40	2176.94	92.36	2084.58
		10/09/2013	14:29	2176.94	92.40	2084.54
		01/15/2014	13:17	2176.94	91.44	2085.50
04/11/2014	07:50	2176.94	90.21	2086.73		
07/25/2014	08:05	2176.94	92.64	2084.30		
MW-29	Shallow Zone Upper Aquifer	01/12/2012	09:10	2171.76	82.51	2089.25
		04/09/2012	09:50	2171.76	81.04	2090.72
		07/23/2012	11:02	2171.76	82.89	2088.87
		10/17/2012	14:30	2171.76	84.60	2087.16
		01/22/2013	09:16	2171.76	83.55	2088.21
		04/16/2013	14:12	2171.76	81.66	2090.10
		07/30/2013	12:21	2171.76	83.62	2088.14
		10/15/2013	09:43	2171.76	84.42	2087.34
		01/21/2014	11:54	2171.76	93.12	2078.64
		04/15/2014	08:29	2171.76	82.84	2088.92
07/21/2014	15:08	2171.76	84.13	2087.63		
MW-31	Deep Zone Upper Aquifer	01/13/2012	08:40	2172.52	86.58	2085.95

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
 Third Quarter 2014 Agricultural Treatment Units Monitoring Report
 Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-31	Deep Zone Upper Aquifer	03/23/2012	12:00	2172.52	93.51	2079.02
		04/09/2012	14:19	2172.52	91.65	2080.88
		05/14/2012	10:30	2172.52	94.09	2078.44
		07/23/2012	15:15	2172.52	94.05	2078.48
		10/17/2012	12:58	2172.52	96.18	2076.35
		01/22/2013	13:37	2172.52	96.79	2075.74
		04/15/2013	12:06	2172.52	89.17	2083.36
		07/30/2013	14:56	2172.52	95.89	2076.64
		10/15/2013	13:31	2172.52	94.55	2077.98
		01/21/2014	09:46	2172.52	94.41	2078.12
		04/14/2014	14:08	2172.52	89.81	2082.72
		07/17/2014	13:33	2172.52	99.43	2073.10
MW-42B1	Deep Zone Upper Aquifer	01/13/2012	10:45	2175.93	87.58	2088.35
		03/23/2012	11:12	2175.93	90.65	2085.28
		04/09/2012	15:10	2175.93	89.91	2086.02
		05/14/2012	09:44	2175.93	91.51	2084.42
		07/24/2012	12:47	2175.93	92.86	2083.07
		10/17/2012	13:12	2175.93	93.09	2082.84
		01/24/2013	11:03	2175.93	91.11	2084.82
		04/16/2013	14:50	2175.93	88.81	2087.12
		07/31/2013	15:35	2175.93	95.23	2080.70
		10/14/2013	09:44	2175.93	94.94	2080.99
		01/24/2014	09:33	2175.93	91.27	2084.66
		04/14/2014	10:04	2175.93	91.64	2084.29
07/25/2014	09:02	2175.93	94.54	2081.39		
MW-42B2	Deep Zone Upper Aquifer	01/13/2012	10:08	2175.74	87.33	2088.41
		04/09/2012	15:52	2175.74	89.69	2086.05
		07/24/2012	13:31	2175.74	92.50	2083.24
		10/17/2012	12:26	2175.74	92.86	2082.88
		12/20/2012	14:12	2175.74	91.38	2084.36
		12/21/2012	07:36	2175.74	91.24	2084.50
		12/21/2012	11:43	2175.74	89.15	2086.59
		12/24/2012	09:48	2175.74	92.44	2083.30
12/26/2012	08:47	2175.74	92.61	2083.13		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-42B2	Deep Zone Upper Aquifer	12/28/2012	09:32	2175.74	92.22	2083.52
		12/31/2012	08:23	2175.74	91.17	2084.57
		01/24/2013	10:05	2175.74	90.88	2084.86
		04/15/2013	15:23	2175.74	89.23	2086.51
		07/31/2013	16:08	2175.74	95.06	2080.68
		10/14/2013	10:19	2175.74	94.72	2081.02
		01/24/2014	08:48	2175.74	91.11	2084.63
		04/14/2014	11:00	2175.74	91.54	2084.20
		07/25/2014	08:17	2175.74	94.31	2081.43
MW-63	Shallow Zone Upper Aquifer	01/16/2012	15:04	2168.34	83.19	2085.15
		03/23/2012	12:06	2168.34	82.22	2086.12
		04/09/2012	10:00	2168.34	82.43	2085.91
		05/14/2012	10:47	2168.34	82.74	2085.60
		07/24/2012	11:55	2168.34	83.63	2084.71
		10/17/2012	11:24	2168.34	84.95	2083.39
		01/24/2013	08:49	2168.34	83.61	2084.73
		04/16/2013	13:08	2168.34	81.32	2087.02
		07/31/2013	09:22	2168.34	82.79	2085.55
		10/14/2013	16:03	2168.34	83.74	2084.60
		01/22/2014	15:20	2168.34	82.60	2085.74
		04/15/2014	08:48	2168.34	81.91	2086.43
		07/21/2014	11:36	2168.34	83.07	2085.27
		MW-71D	Deep Zone Upper Aquifer	01/17/2012	09:08	2159.97
04/10/2012	10:35			2159.97	111.06	2048.91
07/30/2012	12:31			2159.97	97.85	2062.12
10/17/2012	13:46			2159.97	110.68	2049.29
01/24/2013	15:10			2159.97	118.02	2041.95
03/01/2013	14:42			2159.97	97.21	2062.76
04/11/2013	09:39			2159.97	100.86	2059.11
07/30/2013	15:46			2159.97	110.54	2049.43
10/16/2013	15:13			2159.97	98.79	2061.18
01/20/2014	14:24			2159.97	114.50	2045.47
04/14/2014	13:07			2159.97	108.80	2051.17
07/18/2014	09:25	2159.97	120.00	2039.97		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-71S	Shallow Zone Upper Aquifer	01/17/2012	09:58	2160.02	80.98	2079.04
		04/10/2012	11:25	2160.02	82.38	2077.64
		07/30/2012	11:13	2160.02	82.38	2077.64
		10/17/2012	14:22	2160.02	82.81	2077.21
		01/24/2013	15:16	2160.02	82.71	2077.31
		04/11/2013	10:24	2160.02	80.31	2079.71
		07/31/2013	10:12	2160.02	81.41	2078.61
		10/16/2013	14:37	2160.02	81.28	2078.74
		01/20/2014	15:06	2160.02	84.64	2075.38
		04/14/2014	12:07	2160.02	81.27	2078.75
		07/18/2014	10:18	2160.02	82.20	2077.82
MW-83D	Shallow Zone Upper Aquifer	01/17/2012	08:57	2166.42	84.39	2082.03
		04/10/2012	08:43	2166.42	83.41	2083.01
		06/04/2012	13:40	2166.42	83.82	2082.60
		07/24/2012	08:29	2166.42	84.19	2082.23
		10/18/2012	10:24	2166.42	84.91	2081.51
		01/24/2013	07:40	2166.42	84.10	2082.32
		04/11/2013	09:55	2166.42	82.18	2084.24
		07/31/2013	15:54	2166.42	82.69	2083.73
		10/17/2013	10:03	2166.42	83.54	2082.88
		01/22/2014	09:36	2166.42	82.91	2083.51
		04/15/2014	11:28	2166.42	82.78	2083.64
07/21/2014	14:58	2166.42	84.36	2082.06		
MW-83S	Shallow Zone Upper Aquifer	01/17/2012	09:36	2166.48	84.77	2081.71
		04/10/2012	09:36	2166.48	83.65	2082.83
		06/04/2012	14:15	2166.48	83.88	2082.60
		07/24/2012	09:30	2166.48	84.40	2082.08
		10/18/2012	11:02	2166.48	85.01	2081.47
		01/24/2013	08:22	2166.48	84.45	2082.03
		04/11/2013	10:37	2166.48	82.32	2084.16
		07/31/2013	16:29	2166.48	82.82	2083.66
		10/01/2013	14:49	2166.48	83.35	2083.13
		01/22/2014	10:18	2166.48	83.30	2083.18
		04/15/2014	10:31	2166.48	82.95	2083.53

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Desert View Dairy (OU2)						
MW-83S	Shallow Zone Upper Aquifer	07/21/2014	14:18	2166.48	84.20	2082.28
MW-89D	Deep Zone Upper Aquifer	01/18/2012	09:32	2157.53	83.62	2073.91
		04/10/2012	12:19	2157.53	92.24	2065.29
		07/10/2012	09:26	2157.53	96.68	2060.85
		10/12/2012	08:28	2157.53	92.89	2064.64
		01/31/2013	13:56	2157.53	87.80	2069.73
		04/11/2013	12:45	2157.53	84.08	2073.45
		08/01/2013	12:00	2157.53	92.49	2065.04
		10/17/2013	14:40	2157.53	87.92	2069.61
		01/24/2014	08:40	2157.53	80.50	2077.03
		04/15/2014	13:53	2157.53	89.25	2068.28
		07/24/2014	11:43	2157.53	98.08	2059.45
MW-89S	Shallow Zone Upper Aquifer	01/18/2012	10:07	2157.57	78.80	2078.77
		04/10/2012	13:04	2157.57	78.04	2079.53
		07/10/2012	08:37	2157.57	78.46	2079.11
		10/12/2012	09:26	2157.57	78.53	2079.04
		01/31/2013	13:12	2157.57	77.87	2079.70
		04/11/2013	13:25	2157.57	76.68	2080.89
		08/01/2013	12:37	2157.57	76.67	2080.90
		10/17/2013	15:15	2157.57	77.07	2080.50
		01/24/2014	07:50	2157.57	77.11	2080.46
		04/15/2014	13:06	2157.57	76.89	2080.68
		07/24/2014	10:35	2157.57	77.20	2080.37
		09/04/2014	11:35	2157.57	77.91	2079.66
Gorman (OU2)						
MW-105D	Deep Zone Upper Aquifer	02/02/2012	11:08	2154.26	82.61	2071.66
		04/23/2012	13:01	2154.26	82.30	2071.97
		07/19/2012	10:22	2154.26	83.42	2070.85
		10/04/2012	14:10	2154.26	83.40	2070.87
		01/09/2013	14:16	2154.26	83.86	2070.41
		01/30/2013	13:52	2154.26	83.45	2070.82
		04/17/2013	10:01	2154.26	83.51	2070.76
		07/10/2013	09:37	2154.26	84.58	2069.69
		10/10/2013	14:31	2154.26	84.91	2069.36

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Gorman (OU2)						
MW-105D	Deep Zone Upper Aquifer	01/14/2014	08:31	2154.26	83.53	2070.74
		04/16/2014	11:26	2154.26	84.30	2069.97
		07/22/2014	08:38	2154.26	85.30	2068.97
MW-105S	Shallow Zone Upper Aquifer	02/02/2012	11:50	2154.15	78.46	2075.69
		04/18/2012	12:28	2154.15	78.35	2075.80
		07/25/2012	12:20	2154.15	78.56	2075.59
		10/04/2012	15:41	2154.15	78.54	2075.61
		01/25/2013	10:40	2154.15	78.61	2075.54
		04/17/2013	10:43	2154.15	79.31	2074.84
		07/16/2013	16:00	2154.15	78.04	2076.11
		10/10/2013	13:53	2154.15	77.92	2076.23
		01/14/2014	09:06	2154.15	77.88	2076.27
		04/16/2014	12:15	2154.15	77.71	2076.44
		07/22/2014	07:53	2154.15	77.76	2076.39
09/04/2014	10:45	2154.15	77.98	2076.17		
MW-206S	Shallow Zone Upper Aquifer	06/03/2014	11:50	2156.72	76.73	2079.99
		07/10/2014	08:47	2156.72	77.07	2079.65
MW-70D	Deep Zone Upper Aquifer	01/13/2012	10:55	2159.34	96.06	2063.28
		04/10/2012	09:00	2159.34	99.84	2059.50
		07/23/2012	13:44	2159.34	93.72	2065.62
		10/17/2012	12:19	2159.34	103.42	2055.92
		01/24/2013	13:03	2159.34	97.92	2061.42
		04/11/2013	08:53	2159.34	89.65	2069.69
		07/30/2013	14:39	2159.34	99.46	2059.88
		10/16/2013	13:38	2159.34	92.04	2067.30
		01/20/2014	12:42	2159.34	105.80	2053.54
		04/11/2014	09:48	2159.34	97.19	2062.15
07/24/2014	12:55	2159.34	107.88	2051.46		
MW-70S	Shallow Zone Upper Aquifer	01/13/2012	10:09	2159.33	80.31	2079.02
		04/10/2012	09:46	2159.33	79.24	2080.09
		07/23/2012	13:00	2159.33	79.15	2080.18
		10/17/2012	12:56	2159.33	79.46	2079.87
		01/24/2013	13:52	2159.33	78.96	2080.37
		04/11/2013	08:16	2159.33	77.17	2082.16

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Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Gorman (OU2)						
MW-70S	Shallow Zone Upper Aquifer	07/30/2013	15:40	2159.33	77.15	2082.18
		10/16/2013	11:52	2159.33	78.00	2081.33
		01/20/2014	13:25	2159.33	77.86	2081.47
		04/11/2014	08:42	2159.33	77.68	2081.65
		07/24/2014	12:08	2159.33	79.29	2080.04
MW-84D	Deep Zone Upper Aquifer	01/24/2012	14:22	2156.94	81.17	2075.77
		04/23/2012	15:40	2156.94	87.02	2069.92
		07/18/2012	09:38	2156.94	84.50	2072.44
		10/01/2012	11:47	2156.94	85.54	2071.40
		01/08/2013	08:32	2156.94	83.96	2072.98
		01/29/2013	08:33	2156.94	80.25	2076.69
		04/02/2013	09:50	2156.94	85.32	2071.62
		07/03/2013	08:15	2156.94	88.39	2068.55
		10/07/2013	14:40	2156.94	89.35	2067.59
		01/22/2014	12:30	2156.94	85.60	2071.34
		04/16/2014	16:17	2156.94	89.34	2067.60
		07/22/2014	10:00	2156.94	91.77	2065.17
MW-84S	Shallow Zone Upper Aquifer	02/03/2012	12:17	2156.88	78.43	2078.45
		04/24/2012	14:36	2156.88	79.34	2077.54
		06/04/2012	15:08	2156.88	79.22	2077.66
		07/31/2012	12:45	2156.88	79.00	2077.88
		10/08/2012	13:18	2156.88	78.74	2078.14
		01/30/2013	12:48	2156.88	78.42	2078.46
		04/10/2013	16:25	2156.88	77.53	2079.35
		07/16/2013	09:50	2156.88	77.83	2079.05
		10/14/2013	15:18	2156.88	77.91	2078.97
		01/22/2014	11:50	2156.88	77.72	2079.16
		04/16/2014	15:35	2156.88	77.77	2079.11
07/22/2014	11:58	2156.88	78.17	2078.71		
MW-85D	Deep Zone Upper Aquifer	01/17/2012	10:32	2156.83	85.05	2071.78
		03/23/2012	13:12	2156.83	88.32	2068.51
		04/06/2012	12:27	2156.83	89.10	2067.73
		05/14/2012	12:37	2156.83	91.35	2065.48
		07/17/2012	13:02	2156.83	92.16	2064.67

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Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Gorman (OU2)						
MW-85D	Deep Zone Upper Aquifer	10/10/2012	10:23	2156.83	89.87	2066.96
		01/17/2013	09:21	2156.83	89.30	2067.53
		04/11/2013	08:10	2156.83	90.50	2066.33
		07/31/2013	14:00	2156.83	96.25	2060.58
		09/12/2013	09:49	2156.83	95.28	2061.55
		10/17/2013	08:20	2156.83	88.04	2068.79
		01/24/2014	10:20	2156.83	85.91	2070.92
		04/11/2014	11:16	2156.83	95.80	2061.03
		07/24/2014	10:06	2156.83	100.92	2055.91
MW-85S	Shallow Zone Upper Aquifer	01/17/2012	11:10	2157.01	79.04	2077.97
		03/23/2012	13:00	2157.01	78.19	2078.82
		04/10/2012	10:20	2157.01	79.30	2077.71
		05/14/2012	12:40	2157.01	78.26	2078.75
		07/23/2012	12:16	2157.01	77.97	2079.04
		10/18/2012	09:37	2157.01	77.97	2079.04
		01/24/2013	09:05	2157.01	78.65	2078.36
		04/11/2013	09:05	2157.01	76.12	2080.89
		07/31/2013	15:00	2157.01	76.05	2080.96
		10/17/2013	09:00	2157.01	77.23	2079.78
		01/24/2014	11:40	2157.01	77.33	2079.68
		04/11/2014	12:52	2157.01	76.35	2080.66
		07/24/2014	11:11	2157.01	77.57	2079.44
		MW-86D	Deep Zone Upper Aquifer	01/17/2012	12:02	2167.71
04/10/2012	14:46			2167.71	87.55	2080.16
07/20/2012	09:23			2167.71	84.89	2082.82
10/18/2012	11:53			2167.71	91.61	2076.10
01/24/2013	11:48			2167.71	87.92	2079.79
04/16/2013	09:30			2167.71	87.34	2080.37
07/31/2013	08:31			2167.71	92.37	2075.34
10/17/2013	12:15			2167.71	88.82	2078.89
01/22/2014	09:08			2167.71	84.42	2083.29
04/16/2014	13:42			2167.71	87.67	2080.04
07/24/2014	13:53			2167.71	97.02	2070.69
MW-86S	Shallow Zone Upper Aquifer	01/17/2012	12:40	2167.45	84.06	2083.39

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 Third Quarter 2014 Agricultural Treatment Units Monitoring Report
 Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Gorman (OU2)						
MW-86S	Shallow Zone Upper Aquifer	04/10/2012	14:33	2167.45	83.75	2083.70
		07/20/2012	08:15	2167.45	84.19	2083.26
		10/18/2012	12:31	2167.45	84.43	2083.02
		01/24/2013	10:50	2167.45	84.80	2082.65
		04/16/2013	08:46	2167.45	84.52	2082.93
		07/31/2013	09:29	2167.45	84.51	2082.94
		10/17/2013	11:28	2167.45	84.80	2082.65
		01/22/2014	08:01	2167.45	84.84	2082.61
		04/16/2014	14:30	2167.45	84.81	2082.64
		07/24/2014	14:42	2167.45	84.83	2082.62
Ranch (OU2)						
MW-14B	Deep Zone Upper Aquifer	02/01/2012	11:52	2183.73	90.03	2093.70
		03/23/2012	13:17	2183.73	91.13	2092.60
		04/13/2012	11:29	2183.73	91.13	2092.60
		05/14/2012	12:03	2183.73	91.55	2092.18
		07/18/2012	15:19	2183.73	92.28	2091.45
		08/10/2012	08:27	2183.73	92.44	2091.29
		10/15/2012	11:42	2183.73	93.52	2090.21
		11/05/2012	14:43	2183.73	93.65	2090.08
		01/21/2013	11:10	2183.73	93.21	2090.52
		02/04/2013	13:15	2183.73	92.93	2090.80
		04/16/2013	15:15	2183.73	92.20	2091.53
		07/12/2013	12:55	2183.73	94.34	2089.39
		10/17/2013	15:45	2183.73	94.33	2089.40
		01/15/2014	12:57	2183.73	93.50	2090.23
		04/11/2014	13:24	2183.73	92.19	2091.54
07/18/2014	08:05	2183.73	95.41	2088.32		
MW-14S	Shallow Zone Upper Aquifer	02/01/2012	13:05	2181.33	86.70	2094.63
		03/23/2012	13:23	2181.33	85.11	2096.22
		04/13/2012	10:20	2181.33	86.94	2094.39
		05/14/2012	12:07	2181.33	87.30	2094.03
		07/27/2012	09:44	2181.33	96.75	-9999.00
		08/10/2012	09:24	2181.33	88.40	2092.93
		11/05/2012	14:46	2181.33	88.98	2092.35

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Ranch (OU2)						
MW-14S	Shallow Zone Upper Aquifer	11/07/2012	12:11	2181.33	88.98	2092.35
		02/04/2013	13:09	2181.33	89.10	2092.23
		02/07/2013	09:00	2181.33	89.09	2092.24
		05/01/2013	11:13	2181.33	89.23	2092.10
		08/06/2013	08:44	2181.33	89.82	2091.51
		11/08/2013	09:05	2181.33	90.07	2091.26
		02/05/2014	09:10	2181.33	89.81	2091.52
		05/07/2014	12:44	2181.33	89.51	2091.82
		08/06/2014	12:45	2181.33	90.44	2090.89
MW-22A1	Upper Aquifer	03/23/2012	10:46	2176.53	89.07	-9999.00
		05/14/2012	13:57	2176.53	90.04	-9999.00
		08/10/2012	09:30	2176.53	90.81	-9999.00
		11/05/2012	15:09	2176.53	92.11	-9999.00
		02/04/2013	12:00	2176.53	91.04	-9999.00
		04/11/2014	12:00	2176.53	89.55	-9999.00
		07/01/2014	16:00	2176.53	92.25	2084.28
MW-22B	Deep Zone Upper Aquifer	01/27/2012	11:41	2176.81	86.41	2090.40
		03/23/2012	10:53	2176.81	87.62	2089.19
		04/25/2012	13:36	2176.81	88.55	2088.26
		05/14/2012	14:03	2176.81	91.58	2085.23
		07/26/2012	11:35	2176.81	93.55	2083.26
		08/10/2012	09:35	2176.81	91.93	2084.88
		10/11/2012	10:25	2176.81	94.41	2082.40
		11/05/2012	15:13	2176.81	94.67	2082.14
		01/17/2013	13:26	2176.81	91.27	2085.54
		02/04/2013	12:07	2176.81	91.26	2085.55
		04/08/2013	12:20	2176.81	90.39	2086.42
		07/12/2013	09:41	2176.81	95.86	2080.95
		10/15/2013	15:50	2176.81	94.82	2081.99
		01/14/2014	13:47	2176.81	92.64	2084.17
		04/11/2014	08:34	2176.81	89.81	2087.00
07/25/2014	08:48	2176.81	94.05	2082.76		
MW-27A	Shallow Zone Upper Aquifer	01/30/2012	09:30	2185.47	88.41	2097.06
		03/23/2012	12:23	2185.47	88.41	2097.06

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Ranch (OU2)						
MW-27A	Shallow Zone Upper Aquifer	05/14/2012	12:47	2185.47	89.41	2096.06
		07/24/2012	14:38	2185.47	90.32	2095.15
		08/10/2012	10:48	2185.47	90.35	2095.12
		11/05/2012	13:42	2185.47	91.31	2094.16
		01/18/2013	11:38	2185.47	91.01	2094.46
		02/04/2013	13:02	2185.47	90.76	2094.71
		07/17/2013	11:30	2185.47	92.22	2093.25
		01/14/2014	11:31	2185.47	91.42	2094.05
		04/08/2014	13:12	2185.47	91.23	2094.24
		07/23/2014	14:36	2185.47	92.83	2092.64
MW-27B	Deep Zone Upper Aquifer	01/30/2012	09:55	2185.19	91.05	2094.14
		03/23/2012	12:19	2185.19	92.21	2092.98
		05/14/2012	12:42	2185.19	93.00	2092.19
		07/24/2012	13:59	2185.19	93.87	2091.32
		08/10/2012	10:45	2185.19	93.78	2091.41
		11/05/2012	13:40	2185.19	97.26	2087.93
		01/18/2013	12:20	2185.19	94.35	2090.84
		02/04/2013	13:07	2185.19	94.12	2091.07
		07/17/2013	10:39	2185.19	96.20	2088.99
		01/14/2014	11:59	2185.19	94.51	2090.68
MW-56	Deep Zone Upper Aquifer	02/02/2012	08:27	2177.29	87.18	2090.11
		04/27/2012	09:50	2177.29	89.01	2088.28
		07/31/2012	09:51	2177.29	94.40	2082.89
		10/03/2012	10:52	2177.29	95.35	2081.94
		01/28/2013	13:44	2177.29	92.65	2084.64
		04/10/2013	14:33	2177.29	89.87	2087.42
		07/10/2013	14:19	2177.29	96.35	2080.94
		10/15/2013	14:21	2177.29	94.48	2082.81
		01/15/2014	15:22	2177.29	92.45	2084.84
		04/16/2014	11:28	2177.29	90.92	2086.37
07/22/2014	08:20	2177.29	95.71	2081.58		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Yang (OU2)						
MW-21A	Upper Aquifer	12/20/2012	13:45	2171.93	91.97	2079.96
		12/21/2012	12:37	2171.93	91.45	2080.48
		12/21/2012	07:29	2171.93	91.59	2080.34
		12/24/2012	09:59	2171.93	92.89	2079.04
		12/26/2012	08:33	2171.93	93.33	2078.60
		12/28/2012	09:09	2171.93	93.73	2078.20
		12/31/2012	08:11	2171.93	92.13	2079.80
		04/14/2014	09:54	2171.93	88.99	2082.94
		07/17/2014	11:31	2171.93	96.91	2075.02
MW-21B1	Deep Zone Upper Aquifer	01/16/2012	14:30	2172.72	86.91	2085.81
		03/09/2012	11:09	2172.72	91.09	2081.63
		03/23/2012	11:42	2172.72	94.95	2077.77
		04/09/2012	12:10	2172.72	92.00	2080.72
		05/14/2012	10:16	2172.72	96.29	2076.43
		07/23/2012	15:04	2172.72	94.31	2078.41
		10/17/2012	11:47	2172.72	99.60	2073.12
		01/22/2013	12:34	2172.72	96.00	2076.72
		04/15/2013	11:23	2172.72	92.86	2079.86
		07/30/2013	14:25	2172.72	100.05	2072.67
		10/15/2013	14:12	2172.72	95.56	2077.16
		01/21/2014	09:06	2172.72	95.66	2077.06
		04/14/2014	11:00	2172.72	93.19	2079.53
		07/17/2014	10:45	2172.72	103.07	2069.65
		MW-32B1	Deep Zone Upper Aquifer	01/16/2012	13:43	2172.80
03/23/2012	12:25			2172.80	97.57	2075.23
04/09/2012	11:30			2172.80	95.86	2076.94
05/14/2012	11:10			2172.80	100.19	2072.61
07/24/2012	08:38			2172.80	95.07	2077.73
10/17/2012	14:00			2172.80	102.36	2070.44
01/24/2013	12:15			2172.80	97.21	2075.59
04/15/2013	14:29			2172.80	96.77	2076.03
08/01/2013	10:19			2172.80	103.20	2069.60
10/15/2013	12:56			2172.80	96.38	2076.42
01/21/2014	07:42			2172.80	96.51	2076.29

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Yang (OU2)						
MW-32B1	Deep Zone Upper Aquifer	04/16/2014	16:12	2172.80	96.57	2076.23
		07/23/2014	15:30	2172.80	110.42	2062.38
MW-32S	Shallow Zone Upper Aquifer	02/01/2012	15:13	2169.75	84.91	2084.84
		04/25/2012	11:25	2169.75	84.31	2085.44
		07/24/2012	08:44	2169.75	83.66	2086.09
		10/10/2012	11:52	2169.75	84.37	2085.38
		01/17/2013	08:54	2169.75	82.32	2087.43
		04/09/2013	10:44	2169.75	81.00	2088.75
		07/15/2013	15:11	2169.75	82.65	2087.10
		10/15/2013	15:26	2169.75	84.27	2085.48
		01/15/2014	14:19	2169.75	84.95	2084.80
		04/16/2014	15:43	2169.75	84.62	2085.13
MW-49A	Deep Zone Upper Aquifer	07/23/2014	10:45	2169.75	84.81	2084.94
		01/27/2012	11:03	2180.68	82.22	2098.46
		04/17/2012	11:31	2180.68	82.61	2098.07
		07/30/2012	15:38	2180.68	83.71	2096.97
		10/03/2012	15:00	2180.68	84.27	2096.41
		02/01/2013	12:11	2180.68	83.92	2096.76
		04/02/2013	14:42	2180.68	83.70	2096.98
		07/10/2013	09:35	2180.68	85.07	2095.61
		10/09/2013	12:28	2180.68	85.11	2095.57
		01/14/2014	13:25	2180.68	84.61	2096.07
MW-49B	Deep Zone Upper Aquifer	04/16/2014	12:48	2180.68	84.20	2096.48
		07/22/2014	13:53	2180.68	86.24	2094.44
		01/27/2012	10:25	2180.86	83.18	2097.68
		03/23/2012	12:33	2180.86	83.61	2097.25
		05/14/2012	14:30	2180.86	83.93	2096.93
		07/30/2012	15:15	2180.86	85.02	2095.84
		11/05/2012	14:15	2180.86	85.78	2095.08
		02/01/2013	13:02	2180.86	85.23	2095.63
		04/19/2013	11:51	2180.86	84.70	2096.16
		07/10/2013	10:15	2180.86	86.40	2094.46
12/09/2013	15:37	2180.86	86.42	2094.44		
01/14/2014	12:37	2180.86	85.77	2095.09		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Monitored Zone	Monitoring Date	Time	Well MP Elevation (ft MSL)	Depth to Water (ft from MP)	Groundwater Elevation (ft MSL)
Yang (OU2)						
MW-49B	Deep Zone Upper Aquifer	04/16/2014	13:50	2180.86	85.26	2095.60
		06/16/2014	09:44	2180.86	86.93	2093.93
		07/22/2014	13:07	2180.86	87.47	2093.39
MW-88D	Deep Zone Upper Aquifer	01/17/2012	15:20	2171.81	81.12	2090.69
		04/05/2012	14:20	2171.81	83.75	2088.06
		07/17/2012	15:15	2171.81	84.36	2087.45
		10/10/2012	14:08	2171.81	87.55	2084.26
		01/30/2013	09:00	2171.81	86.13	2085.68
		04/09/2013	10:48	2171.81	84.63	2087.18
		07/12/2013	11:32	2171.81	88.78	2083.03
		10/01/2013	10:18	2171.81	86.87	2084.94
		03/06/2014	10:19	2171.81	84.71	2087.10
		04/15/2014	12:59	2171.81	84.80	2087.01
		07/21/2014	09:37	2171.81	89.18	2082.63
MW-88S	Shallow Zone Upper Aquifer	01/18/2012	08:35	2171.82	80.91	2090.91
		04/10/2012	13:59	2171.82	80.49	2091.33
		07/24/2012	13:11	2171.82	81.13	2090.69
		10/12/2012	10:56	2171.82	81.38	2090.44
		01/22/2013	14:50	2171.82	81.46	2090.36
		04/11/2013	13:29	2171.82	81.60	2090.22
		07/31/2013	08:44	2171.82	81.91	2089.91
		09/12/2013	10:02	2171.82	82.16	2089.66
		10/17/2013	14:25	2171.82	82.12	2089.70
		01/24/2014	10:38	2171.82	82.35	2089.47
		04/15/2014	14:05	2171.82	82.40	2089.42
07/21/2014	10:51	2171.82	82.56	2089.26		

Table B-2

Historical Groundwater Levels and Elevations 2012 to Present
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Notes:

^a Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2. Therefore, the Ranch ATU is considered to be in OU2.

ft = feet

MP = Well measure point (either top of steel well casing or top of PVC well casing)

MSL = Mean Sea Level

OU = operable unit

* = Well was in operation

Appendix C
Laboratory Analytical Data

July 09, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012857

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 01, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012857

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



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ASSET Laboratories

Date: 08-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012857
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012857-001A	26-65-059-Q3	Groundwater	7/1/2014 10:42:00 AM	7/1/2014	7/9/2014
N012857-001B	26-65-059-Q3	Groundwater	7/1/2014 10:42:00 AM	7/1/2014	7/9/2014
N012857-002A	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/9/2014
N012857-002B	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/9/2014
N012857-003A	34-59-059-Q3	Groundwater	7/1/2014 11:41:00 AM	7/1/2014	7/9/2014
N012857-003B	34-59-059-Q3	Groundwater	7/1/2014 11:41:00 AM	7/1/2014	7/9/2014
N012857-004A	28-52-059-Q3	Groundwater	7/1/2014 12:01:00 PM	7/1/2014	7/9/2014
N012857-004B	28-52-059-Q3	Groundwater	7/1/2014 12:01:00 PM	7/1/2014	7/9/2014
N012857-005A	28-25-059-Q3	Groundwater	7/1/2014 12:36:00 PM	7/1/2014	7/9/2014
N012857-005B	28-25-059-Q3	Groundwater	7/1/2014 12:36:00 PM	7/1/2014	7/9/2014
N012857-006A	22-73-059-Q3	Groundwater	7/1/2014 12:44:00 PM	7/1/2014	7/9/2014
N012857-006B	22-73-059-Q3	Groundwater	7/1/2014 12:44:00 PM	7/1/2014	7/9/2014
N012857-007A	28-40-059-Q3	Groundwater	7/1/2014 12:57:00 PM	7/1/2014	7/9/2014
N012857-007B	28-40-059-Q3	Groundwater	7/1/2014 12:57:00 PM	7/1/2014	7/9/2014
N012857-008A	28-37-059-Q3	Groundwater	7/1/2014 1:29:00 PM	7/1/2014	7/9/2014
N012857-008B	28-37-059-Q3	Groundwater	7/1/2014 1:29:00 PM	7/1/2014	7/9/2014
N012857-009A	22-80-059-Q3	Groundwater	7/1/2014 1:44:00 PM	7/1/2014	7/9/2014
N012857-009B	22-80-059-Q3	Groundwater	7/1/2014 1:44:00 PM	7/1/2014	7/9/2014
N012857-010A	10-04-059-Q3	Groundwater	7/1/2014 2:31:00 PM	7/1/2014	7/9/2014
N012857-010B	10-04-059-Q3	Groundwater	7/1/2014 2:31:00 PM	7/1/2014	7/9/2014
N012857-011A	28-38-059-Q3	Groundwater	7/1/2014 2:28:00 PM	7/1/2014	7/9/2014
N012857-011B	28-38-059-Q3	Groundwater	7/1/2014 2:28:00 PM	7/1/2014	7/9/2014
N012857-012A	99-14-059-Q3	Groundwater	7/1/2014 2:38:00 PM	7/1/2014	7/9/2014
N012857-012B	99-14-059-Q3	Groundwater	7/1/2014 2:38:00 PM	7/1/2014	7/9/2014
N012857-013A	22-93-059-Q3	Groundwater	7/1/2014 3:31:00 PM	7/1/2014	7/9/2014
N012857-013B	22-93-059-Q3	Groundwater	7/1/2014 3:31:00 PM	7/1/2014	7/9/2014
N012857-014A	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/9/2014
N012857-014B	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/9/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-001

Client Sample ID: 26-65-059-Q3
Collection Date: 7/1/2014 10:42:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC (LOW LEVEL)							
				EPA 218.6			
RunID: IC1_140703A	QC Batch: R94024			PrepDate:	Analyst: RB		
Hexavalent Chromium	ND	0.012	0.060	µg/L	1	7/3/2014 04:03 PM	
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: IC7_140702A	QC Batch: R93990			PrepDate:	Analyst: RB		
Hexavalent Chromium	ND	0.016	0.20	µg/L	1	7/2/2014 11:07 AM	
DISSOLVED METALS BY ICP-MS							
		EPA 3010A		EPA 6020			
RunID: ICP7_140703A	QC Batch: 45979			PrepDate: 7/3/2014	Analyst: CEI		
Chromium	ND	0.030	1.0	µg/L	1	7/3/2014 11:25 AM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 25-14-059-Q3
Lab Order: N012857	Collection Date: 7/1/2014 11:11:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012857-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-003

Client Sample ID: 34-59-059-Q3
Collection Date: 7/1/2014 11:41:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA# A'6M# f@CK' @J9 @

9D5`&%`*`

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<9L5J5 @BH7 <FCA# A'6M#

9D5`&%`*`

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8-GGC @98`A9H5 @G'6M# DIAG

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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-004

Client Sample ID: 28-52-059-Q3
Collection Date: 7/1/2014 12:01:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

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8-GGC @ 98`A9H5 @G'6M7 D!AG

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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-006

Client Sample ID: 22-73-059-Q3
Collection Date: 7/1/2014 12:44:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5	ÚÓÁ&@K F-'--\$				Ú!^] Óæ^		Qç æ^ •dKF6
P^cææ^} ó@[{ ā{	FÊ €€FÎ	€€€	€€€		μ^ È	F	Ï ðððFI ÅFGK FÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5	ÚÓÁ&@K ()-+-				Ú!^] Óæ^	+# #B\$%	Qç æ^ •dK79=
Ó@[{ ā{	G€ €€E-€	FÊ	FÊ		μ^ È	F	Ï ðððFI ÅFGK FÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-007

Client Sample ID: 28-40-059-Q3
Collection Date: 7/1/2014 12:57:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5	ÚÓÁ&@K F-'--\$				Ú!^] Óæ^		Qj æ^ •dKF6
P^ææ^} Ó@[{ ā{	FÈ ÈÈÈÈ	ÈÈÈÈ	ÈÈÈÈ		μ* È	F	Ï ÈÈÈÈÈÈ ÈÈÈÈÈÈÁÚ

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5	ÚÓÁ&@K ()-+-				Ú!^] Óæ^	+# #&\$%	Qj æ^ •dK79=
Ó@[{ ā{	FÈ ÈÈÈÈ	ÈÈÈÈ	FÈÈÈÈÈ		μ* È	F	Ï ÈÈÈÈÈÈ ÈÈÈÈÈÈÁÚ

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-008

Client Sample ID: 28-37-059-Q3
Collection Date: 7/1/2014 1:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5 P^caçç^} cÓ@[{ ā{	ÙÔÁÓ&@K F-'--\$ HÈ ÈÈÈÈ	ÈÈÈÈ	ÈÈÈÈ	Ù!^} Óæ^	µ* È	F	ÙÈ æ^ •cK F6 Ï ÈÈÈÈÈÈ ÈÈÈÈÈÈ ÁÈÈÈÈÈ ÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5 Ô@[{ ā{	ÙÔÁÓ&@K ()-+- HÈ ÈÈÈÈÈÈ	ÈÈÈÈÈÈ	FÈÈÈÈÈÈ	Ù!^} Óæ^	µ* È	+ # ÈÈÈÈ%	ÙÈ æ^ •cK 79= Ï ÈÈÈÈÈÈ ÈÈÈÈÈÈ ÈÈÈÈÈÈ ÁÚT
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- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-009

Client Sample ID: 22-80-059-Q3
Collection Date: 7/1/2014 1:44:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA# A'6M# f@CK' @J9 @

9D5`&%`*`

Ü` }ÖK # %\$% \$+\$' 5	ÚÓÁÓ&@K F-(\$&			Ú!^] Ö&^			Öÿ æ' •dKF6
P^c&æ^} ó@[{ ã{	pÖ €€€FG	€€€ €	€€€ €	μ* Æ		F	Ï ð&öfi Á&fKÍ ÁÚT

<9L5J5 @BH7 <FCA# A'6M#

9D5`&%`*`

Ü` }ÖK # +S% \$+\$&5	ÚÓÁÓ&@K F-' --\$			Ú!^] Ö&^			Öÿ æ' •dKF6
P^c&æ^} ó@[{ ã{	pÖ €€€FÍ	€€€€	€€€€	μ* Æ		F	Ï ð&öfi Á&fKÍ ÁÚT

8-GGC @98'A9H5 @G'6M# DIAG

9D5`\$%\$5

9D5`* \$&\$

Ü` }ÖK # D+S% \$+\$' 5	ÚÓÁÓ&@K ()-+-			Ú!^] Ö&^		+# #&\$%(Öÿ æ' •dK79=
Ö@[{ ã{	pÖ €€€€	€€€€	€€€€	μ* Æ		F	Ï ð&öfi Á&fKÍ ÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-011

Client Sample ID: 28-38-059-Q3
Collection Date: 7/1/2014 2:28:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5	ÙÒÁÓ&@K F-'--\$				Ú!^] Óæ^		Çÿ æ^ •dKF6
P^cææ^} ó@[{ ã{	Çÿ €€€Í	€€€	€€€		µ^ È	F	Ï Æ€€€Í Á€ÇÍ ÁÚ

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5	ÙÒÁÓ&@K ()-+-				Ú!^] Óæ^	+# #B\$%	Çÿ æ^ •dK79=
Ó@[{ ã{	Çÿ €€€€	€€€	€€€		µ^ È	F	Ï Æ€€€Í Á€ÇÍ ÁÚ

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-012

Client Sample ID: 99-14-059-Q3
Collection Date: 7/1/2014 2:38:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5 P^caçç^} ó@[{ ã{	ÙÓÁóas&@K F-'--\$ GÈ €ÈÈÈ		€ÈÈ		Ú!^} Óæ^ µ^ È	F	ÇË æ^ •dKF6 Ï ÈÈÈÈÈÈ ÆGKÌ ÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5 Ó@[{ ã{	ÙÓÁóas&@K ()-+- GÈ €ÈÈÈ		FÈÈ		Ú!^} Óæ^ µ^ È	+# #B\$% F	ÇË æ^ •dK79= Ï ÈÈÈÈÈÈ ÆGKÌ ÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-013

Client Sample ID: 22-93-059-Q3
Collection Date: 7/1/2014 3:31:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$&5	ÚÓÁ&@K F-'--\$				Ú!^] Óæ^		Qç æ^ •dKF6
P^cææ^} ó@[{ ā{	GË €€€Í	€€€	€€€		µ^ È	F	Ï ððççí Á€KÍ ÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 5	ÚÓÁ&@K ()-+-				Ú!^] Óæ^	+# #B\$%	Qç æ^ •dK79=
Ó@[{ ā{	GË €€€€	F€€	F€€		µ^ È	F	Ï ððççí Á€KÍ ÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Jul-14

CLIENT: CH2M HILL
Lab Order: N012857
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012857-014

Client Sample ID: 22-39-059-Q3
Collection Date: 7/1/2014 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<9L5J5 @BH7 <FCA# A'6M# f@CK' @J9 @							
				9D5`&%`*`			
Ü` }ÖK # %\$% \$+\$' 5	ÚÓÁÓ&&@K F-(\$&			Ú!^] Ö&æ^			ÖË æ^ •dKF6
P^c&æ^) ó@[{ ã{	pÖ €€€FG	€€€ €		µ* Æ	F		Ï ð&æ^FI Á&H&G ÁÚT
<9L5J5 @BH7 <FCA# A'6M#							
				9D5`&%`*`			
Ü` }ÖK # +S% \$+\$&5	ÚÓÁÓ&&@K F-' --\$			Ú!^] Ö&æ^			ÖË æ^ •dKF6
P^c&æ^) ó@[{ ã{	pÖ €€€FÍ	€€€€		µ* Æ	F		Ï ð&æ^FI Á&I K&H&ÁÚT
8-GGC @98`A9H5 @G'6M# DIAG							
	9D5`\$%\$5			9D5`*`\$&\$			
Ü` }ÖK # D+S% \$+\$' 5	ÚÓÁÓ&&@K ()-+-			Ú!^] Ö&æ^			ÖË æ^ •dK79=
Ó@[{ ã{	pÖ €€€H€	F€€		µ* Æ	F		Ï ð&æ^FI Á&F&K&ÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012857
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Úæ] ÁÖ A 6IF- (\$&	Úæ]V´^K A 6 @	V^•ó[á^K&%™ SK S@@	Wj ãK ±[#@	Ú Á] ÁÖæ^K	Û´} P[K - (\$&
Ó ã} óÖK D6 K	Óæ&@ÖK F- (\$&	V^•ç[K9 D5´ &%™		Çj æ´•ã ÁÖæ^K + # #B\$%{	Ú^´ P[K % \$\$) - (
Çj æ´ ç	Ú^•´ ç	ÚÚŠ	ÚÚŠÇj æ´ ^ ÚÚŠÁ^ - ÁXæ	Á ÚÒÒ Š , Šj æ Pã Çj æ ÚÚÒÁ^ - ÁXæ	Á ÚÚÒ ÚÚÖŠj æ Ú´ æ

P^çæçj æ´} óÖ@[{ ã { PÖ €€€ €

Úæ] ÁÖ @ GIF- (\$&	Úæ]V´^K @ G	V^•ó[á^K&%™ SK S@@	Wj ãK ±[#@	Ú Á] ÁÖæ^K	Û´} P[K - (\$&
Ó ã} óÖK @ GK	Óæ&@ÖK F- (\$&	V^•ç[K9 D5´ &%™		Çj æ´•ã ÁÖæ^K + # #B\$%{	Ú^´ P[K % \$\$) -)
Çj æ´ ç	Ú^•´ ç	ÚÚŠ	ÚÚŠÇj æ´ ^ ÚÚŠÁ^ - ÁXæ	Á ÚÒÒ Š , Šj æ Pã Çj æ ÚÚÒÁ^ - ÁXæ	Á ÚÚÒ ÚÚÖŠj æ Ú´ æ

P^çæçj æ´} óÖ@[{ ã { €€JJ €€€ € €€€€ € JJ€ J€ FFE

Úæ] ÁÖ B\$%&,)+\$%\$8 I D	Úæ]V´^K 8 I D	V^•ó[á^K&%™ SK S@@	Wj ãK ±[#@	Ú Á] ÁÖæ^K	Û´} P[K - (\$&
Ó ã} óÖK NNNNNN	Óæ&@ÖK F- (\$&	V^•ç[K9 D5´ &%™		Çj æ´•ã ÁÖæ^K + # #B\$%{	Ú^´ P[K % \$\$) - *
Çj æ´ ç	Ú^•´ ç	ÚÚŠ	ÚÚŠÇj æ´ ^ ÚÚŠÁ^ - ÁXæ	Á ÚÒÒ Š , Šj æ Pã Çj æ ÚÚÒÁ^ - ÁXæ	Á ÚÚÒ ÚÚÖŠj æ Ú´ æ

P^çæçj æ´} óÖ@[{ ã { €€€€ €€€ € €€€€€ €€€€€€ € €€€€€€

Úæ] ÁÖ B\$%&,)+\$%\$5 A G	Úæ]V´^K A G	V^•ó[á^K&%™ SK S@@	Wj ãK ±[#@	Ú Á] ÁÖæ^K	Û´} P[K - (\$&
Ó ã} óÖK NNNNNN	Óæ&@ÖK F- (\$&	V^•ç[K9 D5´ &%™		Çj æ´•ã ÁÖæ^K + # #B\$%{	Ú^´ P[K % \$\$) - +
Çj æ´ ç	Ú^•´ ç	ÚÚŠ	ÚÚŠÇj æ´ ^ ÚÚŠÁ^ - ÁXæ	Á ÚÒÒ Š , Šj æ Pã Çj æ ÚÚÒÁ^ - ÁXæ	Á ÚÚÒ ÚÚÖŠj æ Ú´ æ

P^çæçj æ´} óÖ@[{ ã { €€€€ €€€ € €€€€€ €€€€€€ JG€ J€ FFE

Úæ] ÁÖ B\$%&,)+\$%\$5 A G	Úæ]V´^K A G	V^•ó[á^K&%™ SK S@@	Wj ãK ±[#@	Ú Á] ÁÖæ^K	Û´} P[K - (\$&
Ó ã} óÖK NNNNNN	Óæ&@ÖK F- (\$&	V^•ç[K9 D5´ &%™		Çj æ´•ã ÁÖæ^K + # #B\$%{	Ú^´ P[K % \$\$) - -
Çj æ´ ç	Ú^•´ ç	ÚÚŠ	ÚÚŠÇj æ´ ^ ÚÚŠÁ^ - ÁXæ	Á ÚÒÒ Š , Šj æ Pã Çj æ ÚÚÒÁ^ - ÁXæ	Á ÚÚÒ ÚÚÖŠj æ Ú´ æ

P^çæçj æ´} óÖ@[{ ã { €€G €€€ € €€€€€ €€€H Í F JI € J€ FFE

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
 Work Order: N012857
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Úæ] ^ÁŦ B\$%&,)+\$5 A G8	Úæ] ^]^AK A G8	V^• d[á^K&% " SK S@@ W, á K ±[#@	Ú!^] ÁŦæ^K
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&	V^• d[K9 D5` &% " "	Ŧæ`• á ÁŦæ^K + # #B\$%\$
Ŧæ`• á	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ`
P^çæçæ^) áŦ@[{ á {	€ĤĤ	€ĤĤ € €Ĥ€€€ €ĤĤĤĤ F	F€€ J€ FFE €ĤGĤ Ĥ ĤĤ€ Ŧ€

Úæ] ^ÁŦ B\$%&,)+\$5 A G	Úæ] ^]^AK A G	V^• d[á^K&% " SK S@@ W, á K ±[#@	Ú!^] ÁŦæ^K
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&	V^• d[K9 D5` &% " "	Ŧæ`• á ÁŦæ^K + # #B\$%\$
Ŧæ`• á	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ`
P^çæçæ^) áŦ@[{ á {	€ĤJG	€ĤĤ € €Ĥ€€€ €	JĤĤ J€ FFE

Úæ] ^ÁŦ B\$%&,)+\$5 A G	Úæ] ^]^AK A G	V^• d[á^K&% " SK S@@ W, á K ±[#@	Ú!^] ÁŦæ^K
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&	V^• d[K9 D5` &% " "	Ŧæ`• á ÁŦæ^K + # #B\$%\$*
Ŧæ`• á	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ`
P^çæçæ^) áŦ@[{ á {	€ĤFG	€ĤĤ € €Ĥ€€€ €ĤĤĤĤ G	JĤĤ J€ FFE

Úæ] ^ÁŦ B\$%&,)+\$5 A G	Úæ] ^]^AK A G	V^• d[á^K&% " SK S@@ W, á K ±[#@	Ú!^] ÁŦæ^K
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&	V^• d[K9 D5` &% " "	Ŧæ`• á ÁŦæ^K + # #B\$%\$,
Ŧæ`• á	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ`
P^çæçæ^) áŦ@[{ á {	€Ĥ€€	€ĤĤ € €Ĥ€€€ €	JJĤ J€ FFE

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012857
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁÖ A 6 1F - - - \$	Úæ] ^ ÁK A 6 @	V^• d[á^K&% " SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^} P[K - - - \$
Ó á) áÖK D 6 K	Óæ&@ÖK F - - - \$	V^• d[K 9 D 5 ' &% " "	Q; æ' • á ÁÖæ^K +#B#B\$%	Û^} P[K %- - - \$%%
Q; æ' ¸	Û^• c	ÚÚŠ ÚÚSÁçæ^ ÚÚSÁÛ^ ÁXæ	Á ÚÓÓ Š, Šá æ Pá Çä æ ÚÚÓÁÛ^ ÁXæ	Á ÚÚÓ ÚÚÓŠá æ Ú^ æ
P^çæçæ^ áÖ@[{ á {	ÞÖ	€€€		

Úæ] ^ÁÖ @ GIF - - - \$	Úæ] ^ ÁK @ G	V^• d[á^K&% " SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^} P[K - - - \$
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012857
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁŦ B\$%&,+!\$\$5!A G	Úæ] ^ ÁK A G	V^•Ŧ[á^K&% "" SK D; 9 W; á K ±[#@	Ú ^] ÁŦæ^K	Ű^} P[K -' -- \$
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Ōæ'Ŧ	Ű^•^ c	ŰŰŠ ŰŰSÁçæ'^ ŰŰSÁŰ^ ÁXæ'	Á ŰŦŦ Š , Šá æ Pá Ōšá æ ŰŰŦŰŰ^ ÁXæ'	Á ŰŦŦ ŰŰŦŦšá æ Ű^æ'
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Ōæ'Ŧ	Ű^•^ c	ŰŰŠ ŰŰSÁçæ'^ ŰŰSÁŰ^ ÁXæ'	Á ŰŦŦ Š , Šá æ Pá Ōšá æ ŰŰŦŰŰ^ ÁXæ'	Á ŰŦŦ ŰŰŦŦšá æ Ű^æ'
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Ōæ'Ŧ	Ű^•^ c	ŰŰŠ ŰŰSÁçæ'^ ŰŰSÁŰ^ ÁXæ'	Á ŰŦŦ Š , Šá æ Pá Ōšá æ ŰŰŦŰŰ^ ÁXæ'	Á ŰŦŦ ŰŰŦŦšá æ Ű^æ'
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Ōæ'Ŧ	Ű^•^ c	ŰŰŠ ŰŰSÁçæ'^ ŰŰSÁŰ^ ÁXæ'	Á ŰŦŦ Š , Šá æ Pá Ōšá æ ŰŰŦŰŰ^ ÁXæ'	Á ŰŦŦ ŰŰŦŦšá æ Ű^æ'
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁÖ B\$%&,)+\$%&5!A G Ó æ} óÁÖK NNNNNN Çæ æ` ç	Úæ] ^] ^K A G Óæ&@ÁÖK F-'--\$ Ú^·` c	V^· d[á^K&% "" SK D; 9 Wj æ·K ±[#@ V^· ç[K9D5`&% "" ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^·Áæ	Ú!^] ÁÖæ^K Çæ æ`· æ ÁÖæ^K +#B#B\$% Á ÚÚÖ Š , Šæ æ Pæ Çæ æ ÚÚÖÁÛ^·Áæ	Û` } P[K-'--\$ Ú^· P[K %+- \$(& Á ÚÚÖ ÚÚÖŠæ æ Ú` æ				
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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Úæ] ^ÁÖ A 6 I (- +-	Úæ] ^] ^K A 6 @	V^• d[á^K* \$&\$8 -GS7 fD Wj áK ±[#@	Ú!^] ÁÖæ^K + # #B\$%	Û^} P[K - (\$\$ (
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Qualifiers:

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Project Name PGE Hinkley
 Location Hinkley
 Project Number 492584.UR.DM.FW
 Project Manager Jennifer Low
 Sample Manager Jim Harvey
 Cell Number (404) 229-2181
 Fax Number (510) 622-9136
 Task Order 59
 Project 2014-DOM-059-Q3
 Turnaround Time 5 Days
 Shipping Date: 070114
 COC Number:

Container: 250 ml Poly, 500 ml Poly
 Preservatives: (NH4)2SO4, NH4, OH, 4°C, HNO3, 4°C
 Filtered: Field, Field
 Holding Time (days): 28, 180
 Cr(VI) (E218.6) FF
 Metals Dissolved (6020AFF) FF Cr

Please revise the sample ID in line 1 per the markup. The actual ID should be "26-65-059-Q3", not "26-66-059-Q3".
 Thanks, Jim Harvey 8/8/14

James L. Harvey

N012857

5 SAMPLE ID	DATE	TIME	Matrix				Number of Containers	COMMENTS
26-66-059-Q3	070114	1042	GW	X	X		2	PGE (frm. Ryker D/D) ✓
25-14-059-Q3	070114	1111	GW	X	X		2	Markowitz ✓
34-59-059-Q3	070114	1141	GW	X	X		2	PGE (frm. Miller) ✓
28-52-059-Q3	070114	1201	GW	X	X		2	PGE (frm. Smith) ✓
28-25-059-Q3	070114	1236	GW	X	X		2	Hinkley Market ✓
22-73-059-Q3	070114	1244	GW	X	X		2	PGE (frm. Jarnagin) ✓
28-40-059-Q3	070114	1257	GW	X	X		2	Hinkley FDepartment ✓
28-37-059-Q3	070114	1329	GW	X	X		2	PGE (frm. Mahoney) ✓
22-80-059-Q3	070114	1344	GW	X	X		2	PGE (frm. Andujo) ✓
10-04-059-Q3	070114	1431	GW	X	X		2	Dessert Research Station ✓
28-38-059-Q3	070114	1428	GW	X	X		2	PGE (frm. Jaquez) ✓
99-14-059-Q3	070114	1438	GW	X	X		2	PGE ✓
22-93-059-Q3	070114	1531	GW	X	X		2	PGE (frm. Saker) ✓
22-39-059-Q3	070114	1341	GW	X	X		2	Bangle ✓
TOTAL NUMBER OF CONTAINERS								

Approved by *[Signature]* Date/Time 070114/1650
 Sampled by *[Signature]* 070114 1650
 Relinquished by *[Signature]* 070114 1650
 Received by *[Signature]* 7/11/14 1650
 Relinquished by *[Signature]* 7/11/14 1650
 Received by *[Signature]* 7/11/14 1914

Shipping Details
 Method of Shipment: hand delivered
 On Ice: yes / no 2.7°C / 3.5°C
 Airbill No: 1R#2
 Lab Name: Advanced Technology Laboratories
 Lab Phone: (702) 307-2659

ATTN:
 Special Instructions:
 Report Copy to:
 Shawn Duffy
 (530) 941-9227
 2525 Airpark Drive, Redding, CA 96001

5 GG9 H' @VcfUrcfJYg

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/1/2014 Workorder: N012857
 Rep sample Temp (Deg C): 2.9/3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

GUa d'Y F YW]dih7 \ YW`lgh

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed B AC  7/2/2014

Reviewed By:  07/08/14



Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012857-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.020217 * 1 \\ &= 0.020217\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/8/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012857-013A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 2.3784 * 1 \\ &= 2.3784\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.4$$

 7/8/2014

GLA d`Y 7 UW`Ujcb

A9H<C8 . EPA 6020
H9GH`B5 A9 . Heavy Metals by ICP-MS
A5HF±. Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **B\$%&) +!\$\$, 6 ž** the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.0419012898 * 1 * (25/25) \\ &= 3.0419012898 \end{aligned}$$

Reporting results in two significant figures,

$$7 \setminus fca \ ji \ a \ ži \ [\ #@ \quad 1 \quad ' \ '$$$

 7/8/2014

5 GG9H' @JvcfUrcf]Yg

-7 DIA YfUg]b'K UHf

Work Order No.: N012857
Test Method: EPA 6020
Analysis Date: 7/3/2014

8]i h]cb'HYghGi a a Ufn

Matrix: Water
Batch No.: 45979

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012857-001B-DT 5X	Chromium	µg/L	0	NA	0.0527759	100.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
 Work Order: N012857
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: B\$%&,) +!\$%6 !DG	SampType: DG	TestCode: *\$&\$8 -GS7 fD	Units: ±[#@	Prep Date:	RunNo: - (\$\$ (
Client ID: NNNNN	Batch ID: () - +-	TestNo: 9 D5 * \$&\$ 9 D5 ' \$%\$5		Analysis Date: + # #&\$% (SeqNo: %+- - ' ((
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.551	2.0	20.00	0.05278	97.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 15, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012858

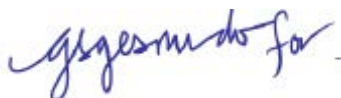
RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 01, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012858

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 300.0:

Dilution was necessary on N012858-002 due to precipitation of sample upon the addition of eluent.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012858
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012858-001A	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/15/2014
N012858-001B	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/15/2014
N012858-001C	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/15/2014
N012858-001D	25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	7/1/2014	7/15/2014
N012858-002A	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/15/2014
N012858-002B	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/15/2014
N012858-002C	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/15/2014
N012858-002D	22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	7/1/2014	7/15/2014



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 25-14-059-Q3
Lab Order: N012858	Collection Date: 7/1/2014 11:11:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012858-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140702F	QC Batch: 45974			PrepDate	7/2/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	570	10	10	mg/L	1	7/2/2014 08:14 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012858
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012858-002

Client Sample ID: 22-39-059-Q3
Collection Date: 7/1/2014 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140702F	QC Batch: 45974			PrepDate	7/2/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2400	18	18	mg/L	1	7/2/2014 08:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012858
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-45974	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/2/2014	RunNo: 94033
Client ID: PBW	Batch ID: 45974	TestNo: SM2540C		Analysis Date: 7/2/2014	SeqNo: 1800785
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera ND 10

Sample ID LCS-45974	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/2/2014	RunNo: 94033
Client ID: LCSW	Batch ID: 45974	TestNo: SM2540C		Analysis Date: 7/2/2014	SeqNo: 1800786
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 983.000 10 1000 0 98.3 80 120

Sample ID N012858-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/2/2014	RunNo: 94033
Client ID: ZZZZZ	Batch ID: 45974	TestNo: SM2540C		Analysis Date: 7/2/2014	SeqNo: 1800788
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 562.000 10 566.0 0.709 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 25-14-059-Q3
Lab Order: N012858	Collection Date: 7/1/2014 11:11:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012858-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140703C	QC Batch: 45976			PrepDate	7/3/2014	Analyst: CEI
Uranium	8.5	0.011	0.67	pCi/L	1	7/3/2014 05:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012858
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012858-002

Client Sample ID: 22-39-059-Q3
Collection Date: 7/1/2014 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140703C	QC Batch: 45976			PrepDate	7/3/2014	Analyst: CEI
Uranium	30	0.011	0.67	pCi/L	1	7/3/2014 06:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012858
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-45976	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/3/2014	RunNo: 94018
Client ID: PBW	Batch ID: 45976	TestNo: EPA 200.8		Analysis Date: 7/3/2014	SeqNo: 1800085
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	ND	0.67			
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Sample ID LCS-45976	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/3/2014	RunNo: 94018
Client ID: LCSW	Batch ID: 45976	TestNo: EPA 200.8		Analysis Date: 7/3/2014	SeqNo: 1800086
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	6.943	0.67	6.700	0	104 85 115
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Sample ID N012858-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/3/2014	RunNo: 94018
Client ID: ZZZZZZ	Batch ID: 45976	TestNo: EPA 200.8		Analysis Date: 7/3/2014	SeqNo: 1800090
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	15.489	0.67	6.700	8.527	104 75 125
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Sample ID N012858-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/3/2014	RunNo: 94018
Client ID: ZZZZZZ	Batch ID: 45976	TestNo: EPA 200.8		Analysis Date: 7/3/2014	SeqNo: 1800093
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	15.849	0.67	6.700	8.527	109 75 125 15.49 2.29 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 25-14-059-Q3
Lab Order: N012858	Collection Date: 7/1/2014 11:11:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012858-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140702A	QC Batch: R93995			PrepDate		Analyst: PS
Nitrate as N	3.4	0.026	0.25	mg/L	5	7/2/2014 02:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012858
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012858-002

Client Sample ID: 22-39-059-Q3
Collection Date: 7/1/2014 1:41:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140702A** QC Batch: **R93995** PrepDate: Analyst: **PS**
Nitrate as N 11 0.026 0.25 mg/L 5 7/2/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012858
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R93995_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 93995						
Client ID: PBW	Batch ID: R93995	TestNo: EPA 300.0		Analysis Date: 7/2/2014	SeqNo: 1799124						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID LCS-R93995_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 93995						
Client ID: LCSW	Batch ID: R93995	TestNo: EPA 300.0		Analysis Date: 7/2/2014	SeqNo: 1799125						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.959 0.050 1.000 0 95.9 90 110

Sample ID N012858-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 93995						
Client ID: ZZZZZ	Batch ID: R93995	TestNo: EPA 300.0		Analysis Date: 7/2/2014	SeqNo: 1799128						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 3.320 0.25 3.355 1.05 20

Sample ID N012858-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 93995						
Client ID: ZZZZZ	Batch ID: R93995	TestNo: EPA 300.0		Analysis Date: 7/2/2014	SeqNo: 1799129						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 8.155 0.25 5.000 3.355 96.0 80 120

Sample ID N012858-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 93995						
Client ID: ZZZZZ	Batch ID: R93995	TestNo: EPA 300.0		Analysis Date: 7/2/2014	SeqNo: 1799130						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 8.270 0.25 5.000 3.355 98.3 80 120 8.155 1.40 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.


Cooler Received/Opened On: 7/1/2014 Workorder: N012858
 Rep sample Temp (Deg C): 2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/>
Yes <input type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>
NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed B AC  7/2/2014

Reviewed By  07/08/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Blane Tech

02-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012858-001D / 25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	16OZP	1		
N012858-002D / 22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	16OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012858 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@atl-labs.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. Please contact Shawn Duffy (530)941-9227 for questions.

FedEx#: 7704 9033 8496

Relinquished by: <u>ACortez</u> 7/2/2014	Date/Time 1500	Received by: _____	Date/Time _____
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012858-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.8614-63.8048)*1000000}{100}$$

566 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 570 \text{ mg/L}$$


7/8/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/2/2014							TDS/CONDUCTIVITY	
Date Finished: 7/3/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-45974	100	63.9984	63.9984	0	1	0.00		
LCS-45974	100	64.2772	64.3755	983	1	983.00		
N012858-001C	100	63.8048	63.8614	566	1	566.00	844	0.67
N012858-001C-DUP	100	63.7829	63.8391	562	1	562.00	844	0.67
N012858-002C	55	61.3651	61.4961	1310	1.8181818	2381.82	2640	0.90
N012861-001C	60	62.9996	63.1462	1466	1.6666667	2443.33	2490	0.98
Date Started: 7/7/2014							TDS/CONDUCTIVITY	
Date Finished: 7/8/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-45993	100	63.3758	63.3759	1	1	1.00		
LCS-45993	100	63.5117	63.6099	982	1	982.00		
N012858-002C	55	63.9799	64.1189	1390	1.8181818	2527.27	2710	0.93
N012861-001C	60	64.1117	64.2588	1471	1.6666667	2451.67	2490	0.98
N012864-001C	100	60.3153	60.3854	701	1	701.00	1080	0.65
N012864-001C-DUP	100	60.3432	60.4143	711	1	711.00	1080	0.66
N012864-002C	100	62.4474	62.4952	478	1	478.00	730	0.65
N012864-003C	100	59.9099	59.9984	885	1	885.00	1263	0.70
N012864-004C	100	61.7349	61.7854	505	1	505.00	774	0.65

Confirmation
only
mc7/8/14

mc
7/8/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012858-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 12.7265134234361 * 1 * (25/25) * 0.67 \\ &= 8.52676399370219 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 8.5$$

Nancy 7/14/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012858
Test Method: EPA 200.8
Analysis Date: 7/3/2014

Dilution Test Summary

Matrix: Water
Batch No.: 45976

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012858-001A-DT 5X	Uranium	pCi/L	8.681740684	NA	8.526763994	1.82%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012858
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012858-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94018						
Client ID: ZZZZZ	Batch ID: 45976	TestNo: EPA 200.8	Analysis Date: 7/3/2014	SeqNo: 1800089							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	24.008	1.3	13.40	8.527	116	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012858-002B** concentration in mg/L is calculated as follows:

$$\begin{aligned}\text{Nitrate, mg/L} &= 2.146 * 5 \\ &= 10.73\end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 11$$

Nancy 7/14/2014

July 22, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012858-001D
Pace Project No.: 30124387

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carin Ferris for
Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



F9 DCFH'C: ' @ 6 CF5 HCFM5 B5 @MG-G

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G5 AD@ 'GI AA5 FM

Project: N012858-001D
Pace Project No.: 30124387

@V-8	GUa d'Y-8	A Ufjl	8 UH'7 c''YWHX	8 UH'F YWlj YX
' \$%&' , +\$\$%	B\$%& , !\$\$%8 '#&!%(!\$) - !E'	Water	07/01/14 11:11	07/08/14 10:00
' \$%&' , +\$\$&	B\$%& , !\$\$88 '#&! - !E'	Water	07/01/14 13:41	07/08/14 10:00

F9 DCFH'C: `@ 6 CF5 HCFM5 B5 @IG-G

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G5 AD@ '5 B5 @M9 '7 CI BH

Project: N012858-001D
Pace Project No.: 30124387

@N'-8	GUa d'Y'-8	A Yh cX	5 bU ngrg	5 bU nHjg FYdcfH'X
' \$%&' , +\$\$%	B\$%& , !\$\$%8 '#&!%(!\$) - !E'	EPA 900.0	FCC	2
' \$%&' , +\$\$&	B\$%& , !\$\$&8 '#&&' - !E'	EPA 900.0	FCC	2

F9 DCFH'C: ' @6 CF5 HCFM5 B5 @M-G

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DFC>97 H'B5 FF5HJ9

Project: N012858-001D
Pace Project No.: 30124387

A Yh cX. 9D5' - \$\$\$
8 YgW]dHcb. 900.0 Gross Alpha/Beta
7`Ybh ASSET Laboratories
8 UY. July 22, 2014

; YbYfU' bZfa UHcb.

2 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

<c`X`H]a Y.

The samples were analyzed within the method required hold times with any exceptions noted below.

A Yh cX'6`Ub_.

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

@VcfUrcfm7 cblfc`Gd]_Y.

All laboratory control spike compounds were within QC limits with any exceptions noted below.

A Uf]l `Gd]_Yg.

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

5 XX]HcbU`7 ca a Ybtg.

This data package has been reviewed for quality and completeness and is approved for release.

F9 DCFH'C: `@ 6 CF5 HCFM5 B5 @MG-G

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5 B5 @H75 @F9GI @IG

Project: N012858-001D
Pace Project No.: 30124387

GLa d`Y. B\$%& , !\$\$88 #&&' - !%) - ! @UV-B. ' \$%&' , +\$\$% Collected: 07/01/14 11:11 Received: 07/08/14 10:00 Matrix: Water

PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	%\$ - '&' +''fB'-\$L 7.B5`HB5	pCi/L	07/15/14 19:48	12587-46-1	
Gross Beta	EPA 900.0	'&' - '\$' - ''fB'-\$L 7.B5`HB5	pCi/L	07/15/14 19:48	12587-47-2	

GLa d`Y. B\$%& , !\$\$88 #&&' - !%) - ! @UV-B. ' \$%&' , +\$\$% Collected: 07/01/14 13:41 Received: 07/08/14 10:00 Matrix: Water

PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	%\$ - '&' +''fB'-\$L 7.B5`HB5	pCi/L	07/15/14 19:48	12587-46-1	
Gross Beta	EPA 900.0	'&' - '\$' - ''fB'-\$L 7.B5`HB5	pCi/L	07/15/14 19:48	12587-47-2	

F9DCFH'C: `@6 CF5HCFM5 B5 @IG-G

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EI 5 @HM7 CBHFC @85H5

Project: N012858-001D
Pace Project No.: 30124387

QC Batch: RADC/20497 Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 30124387001, 30124387002

METHOD BLANK: 758655 Matrix: Water
Associated Lab Samples: 30124387001, 30124387002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.017 ± 0.583 (1.59) C:NA T:NA	pCi/L	07/16/14 08:30	
Gross Beta	0.058 ± 0.700 (1.72) C:NA T:NA	pCi/L	07/16/14 08:30	

FYgi `tg`dfYgYbHX`cb`R`Jg`dU[`Y`UFY]b`R`Y`i`b]Jg]bX]MURX`VmiH`Y`"I`b]Jg`"Vc`i`a`b`YI`WdHk`YFY`Ub`U`HYfbUR`i`b]h]g`dfYgYbHX`tc`R`Y`f]I`h`c`Z`R`Y`f`Y`gi`"H`"

F9DCFH'C: `@6 CF5HCFM5 B5 @MG-G

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.afl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Blane Tech

30124387
02-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012858-001D / 25-14-059-Q3	Groundwater	7/1/2014 11:11:00 AM	16OZP	1		
N012858-002D / 22-39-059-Q3	Groundwater	7/1/2014 1:41:00 PM	16OZP	1		001 002

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012858 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@atl-labs.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. Please contact Shawn Duffy (530)941-9227 for questions.

Date/Time		Date/Time	
Relinquished by: <i>Sharon</i>	7/2/2014	Received by: <i>Scott Perkins</i>	7/8/14 1:00
Relinquished by:	1500	Received by:	
FedEx#: 7704 9033 8496			



Sample Condition Upon Receipt

Client Name: ATL

Project 30124387

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770490338496

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags _____ None _____ Other _____

Thermometer Used NA Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: _____

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>wt</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. (PHLZ)
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, colliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>SRA</u> Lot # of added preservative _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Carina Senio Date: 7/9/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/18/2014
Worklist: 20487
Matrix: Soil
Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 758655



Method Blank Assessment		Sample Matrix Spike Control Assessment	
Activity	1.96 Sig Unc.	MDC	Flag
Gross Alpha	0.0170	1.5860	0.48600
Gross Beta	0.0580	0.7000	0.58100

Laboratory Control Sample Assessment		Sample Matrix Spike Control Assessment	
Analyte:	Count Date:	Gross Alpha	
		LCS	LCS D
Spike I.D.:	7/16/14 9.10	7/16/14 9.10	7/16/14 9.09
Spike Concentration (pCi/L):	13-048GA	13-047GB	13-047GB
Volume Used (mL):	64.598	84.655	84.655
Aliquot Volume (L, g, F):	0.050	0.050	0.050
Target Conc. (pCi/L, g, F):	0.201	0.201	0.202
1.96 Sigma Uncertainty (Calculated):	16.033	15.995	21.011
Result (pCi/L, g, F):	13.927	12.819	12.774
1.96 Sigma Unc:	2.518	2.396	2.196
% Recovery:	86.86%	80.14%	104.93%
Assessment:	Pass	Pass	Pass
Upper % Recovery Limits:	121.00%	130.00%	130.00%
Lower % Recovery Limits:	69.00%	79.00%	79.00%

Duplicate Sample Assessment		Sample Matrix Spike Duplicate Sample Assessment	
LCS/ICSD Y or N?	Y	Y	Y
Gross Alpha	Gross Beta	Gross Alpha	Gross Beta
LCS20497	LCS20487	LCS20487	LCS20487
Duplicate Sample I.D.	Duplicate Sample I.D.	Sample I.D.	Sample I.D.
1.96 Sigma Unc:	1.96 Sigma Unc:	Sample MSD I.D.	Sample MSD I.D.
2.5180	2.3320	Sample Matrix Spike Result:	Sample Matrix Spike Result:
21.8950	21.8950	Sample Matrix Spike 1.96 Sigma Unc.:	Sample Matrix Spike 1.96 Sigma Unc.:
2.3970	2.3970	Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
NO	NO	Sample Matrix Spike Duplicate 1.96 Sigma Unc.:	Sample Matrix Spike Duplicate 1.96 Sigma Unc.:
Relative Percent Difference:	8.29%	MS/MSD Relative Percent Difference:	MS/MSD Relative Percent Difference:
Assessment:	Pass	MS/MSD RPD Assessment:	MS/MSD RPD Assessment:
% RPD Limit:	34.00%	% RPD Limit:	% RPD Limit:
	29.00%		

Method Blank Assessment		Sample Matrix Spike Control Assessment	
Activity	1.96 Sig Unc.	MDC	Flag
Gross Alpha	0.0170	1.5860	0.48600
Gross Beta	0.0580	0.7000	0.58100

Laboratory Control Sample Assessment		Sample Matrix Spike Control Assessment	
Analyte:	Count Date:	Gross Alpha	
		LCS	LCS D
Spike I.D.:	7/16/14 9.10	7/16/14 9.10	7/16/14 9.09
Spike Concentration (pCi/L):	13-048GA	13-047GB	13-047GB
Volume Used (mL):	64.598	84.655	84.655
Aliquot Volume (L, g, F):	0.050	0.050	0.050
Target Conc. (pCi/L, g, F):	0.201	0.201	0.202
1.96 Sigma Uncertainty (Calculated):	16.033	15.995	21.011
Result (pCi/L, g, F):	13.927	12.819	12.774
1.96 Sigma Unc:	2.518	2.396	2.196
% Recovery:	86.86%	80.14%	104.93%
Assessment:	Pass	Pass	Pass
Upper % Recovery Limits:	121.00%	130.00%	130.00%
Lower % Recovery Limits:	69.00%	79.00%	79.00%

Duplicate Sample Assessment		Sample Matrix Spike Duplicate Sample Assessment	
LCS/ICSD Y or N?	Y	Y	Y
Gross Alpha	Gross Beta	Gross Alpha	Gross Beta
LCS20497	LCS20487	LCS20487	LCS20487
Duplicate Sample I.D.	Duplicate Sample I.D.	Sample I.D.	Sample I.D.
1.96 Sigma Unc:	1.96 Sigma Unc:	Sample MSD I.D.	Sample MSD I.D.
2.5180	2.3320	Sample Matrix Spike Result:	Sample Matrix Spike Result:
21.8950	21.8950	Sample Matrix Spike 1.96 Sigma Unc.:	Sample Matrix Spike 1.96 Sigma Unc.:
2.3970	2.3970	Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
NO	NO	Sample Matrix Spike Duplicate 1.96 Sigma Unc.:	Sample Matrix Spike Duplicate 1.96 Sigma Unc.:
Relative Percent Difference:	8.29%	MS/MSD Relative Percent Difference:	MS/MSD Relative Percent Difference:
Assessment:	Pass	MS/MSD RPD Assessment:	MS/MSD RPD Assessment:
% RPD Limit:	34.00%	% RPD Limit:	% RPD Limit:
	29.00%		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

PHILIP MD

[Signature]

July 10, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012863

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 02, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012863

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.114 ug/L) and hexavalent chromium (0.668 ug/L) for sample N012863-019 (33-25-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.032 and 2.063 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



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ASSET Laboratories

Date: 09-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012863
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012863-001A	02-21-059-Q3	Groundwater	7/2/2014 3:51:00 PM	7/2/2014	7/10/2014
N012863-001B	02-21-059-Q3	Groundwater	7/2/2014 3:51:00 PM	7/2/2014	7/10/2014
N012863-002A	02-26-059-Q3	Groundwater	7/2/2014 3:16:00 PM	7/2/2014	7/10/2014
N012863-002B	02-26-059-Q3	Groundwater	7/2/2014 3:16:00 PM	7/2/2014	7/10/2014
N012863-003A	06-20-059-Q3	Groundwater	7/2/2014 11:10:00 AM	7/2/2014	7/10/2014
N012863-003B	06-20-059-Q3	Groundwater	7/2/2014 11:10:00 AM	7/2/2014	7/10/2014
N012863-004A	16N-01-059-Q3	Groundwater	7/2/2014 8:49:00 AM	7/2/2014	7/10/2014
N012863-004B	16N-01-059-Q3	Groundwater	7/2/2014 8:49:00 AM	7/2/2014	7/10/2014
N012863-005A	21-02-059-Q3	Groundwater	7/2/2014 3:55:00 PM	7/2/2014	7/10/2014
N012863-005B	21-02-059-Q3	Groundwater	7/2/2014 3:55:00 PM	7/2/2014	7/10/2014
N012863-006A	21-03-059-Q3	Groundwater	7/2/2014 3:32:00 PM	7/2/2014	7/10/2014
N012863-006B	21-03-059-Q3	Groundwater	7/2/2014 3:32:00 PM	7/2/2014	7/10/2014
N012863-007A	21N-02-059-Q3	Groundwater	7/2/2014 12:20:00 PM	7/2/2014	7/10/2014
N012863-007B	21N-02-059-Q3	Groundwater	7/2/2014 12:20:00 PM	7/2/2014	7/10/2014
N012863-008A	21N-04-059-Q3	Groundwater	7/2/2014 10:41:00 AM	7/2/2014	7/10/2014
N012863-008B	21N-04-059-Q3	Groundwater	7/2/2014 10:41:00 AM	7/2/2014	7/10/2014
N012863-009A	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/10/2014
N012863-009B	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/10/2014
N012863-010A	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/10/2014
N012863-010B	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/10/2014
N012863-011A	27-42-059-Q3	Groundwater	7/2/2014 8:11:00 AM	7/2/2014	7/10/2014
N012863-011B	27-42-059-Q3	Groundwater	7/2/2014 8:11:00 AM	7/2/2014	7/10/2014
N012863-012A	27-48-059-Q3	Groundwater	7/2/2014 7:51:00 AM	7/2/2014	7/10/2014
N012863-012B	27-48-059-Q3	Groundwater	7/2/2014 7:51:00 AM	7/2/2014	7/10/2014
N012863-013A	27-49-059-Q3	Groundwater	7/2/2014 7:40:00 AM	7/2/2014	7/10/2014
N012863-013B	27-49-059-Q3	Groundwater	7/2/2014 7:40:00 AM	7/2/2014	7/10/2014
N012863-014A	28-16-059-Q3	Groundwater	7/2/2014 9:47:00 AM	7/2/2014	7/10/2014
N012863-014B	28-16-059-Q3	Groundwater	7/2/2014 9:47:00 AM	7/2/2014	7/10/2014
N012863-015A	28-17-059-Q3	Groundwater	7/2/2014 11:06:00 AM	7/2/2014	7/10/2014



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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012863
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012863-015B	28-17-059-Q3	Groundwater	7/2/2014 11:06:00 AM	7/2/2014	7/10/2014
N012863-016A	28-66-059-Q3	Groundwater	7/2/2014 2:44:00 PM	7/2/2014	7/10/2014
N012863-016B	28-66-059-Q3	Groundwater	7/2/2014 2:44:00 PM	7/2/2014	7/10/2014
N012863-017A	28N-04-059-Q3	Groundwater	7/2/2014 12:58:00 PM	7/2/2014	7/10/2014
N012863-017B	28N-04-059-Q3	Groundwater	7/2/2014 12:58:00 PM	7/2/2014	7/10/2014
N012863-018A	28N-05-059-Q3	Groundwater	7/2/2014 1:28:00 PM	7/2/2014	7/10/2014
N012863-018B	28N-05-059-Q3	Groundwater	7/2/2014 1:28:00 PM	7/2/2014	7/10/2014
N012863-019A	33-25-059-Q3	Groundwater	7/2/2014 1:16:00 PM	7/2/2014	7/10/2014
N012863-019B	33-25-059-Q3	Groundwater	7/2/2014 1:16:00 PM	7/2/2014	7/10/2014
N012863-020A	33-26-059-Q3	Groundwater	7/2/2014 12:36:00 PM	7/2/2014	7/10/2014
N012863-020B	33-26-059-Q3	Groundwater	7/2/2014 12:36:00 PM	7/2/2014	7/10/2014
N012863-021A	33-27-059-Q3	Groundwater	7/2/2014 10:36:00 AM	7/2/2014	7/10/2014
N012863-021B	33-27-059-Q3	Groundwater	7/2/2014 10:36:00 AM	7/2/2014	7/10/2014
N012863-022A	33-30-059-Q3	Groundwater	7/2/2014 10:11:00 AM	7/2/2014	7/10/2014
N012863-022B	33-30-059-Q3	Groundwater	7/2/2014 10:11:00 AM	7/2/2014	7/10/2014
N012863-023A	33N-02-059-Q3	Groundwater	7/2/2014 12:01:00 PM	7/2/2014	7/10/2014
N012863-023B	33N-02-059-Q3	Groundwater	7/2/2014 12:01:00 PM	7/2/2014	7/10/2014
N012863-024A	36-17-059-Q3	Groundwater	7/2/2014 10:01:00 AM	7/2/2014	7/10/2014
N012863-024B	36-17-059-Q3	Groundwater	7/2/2014 10:01:00 AM	7/2/2014	7/10/2014
N012863-025A	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/10/2014
N012863-025B	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/10/2014
N012863-026A	36-26-059-Q3	Groundwater	7/2/2014 10:41:00 AM	7/2/2014	7/10/2014
N012863-026B	36-26-059-Q3	Groundwater	7/2/2014 10:41:00 AM	7/2/2014	7/10/2014
N012863-027A	36-43-059-Q3	Groundwater	7/2/2014 10:20:00 AM	7/2/2014	7/10/2014
N012863-027B	36-43-059-Q3	Groundwater	7/2/2014 10:20:00 AM	7/2/2014	7/10/2014
N012863-028A	BGS-27-059-Q3	Groundwater	7/2/2014 9:47:00 AM	7/2/2014	7/10/2014
N012863-028B	BGS-27-059-Q3	Groundwater	7/2/2014 9:47:00 AM	7/2/2014	7/10/2014
N012863-029A	BGS-47-059-Q3	Groundwater	7/2/2014 12:38:00 PM	7/2/2014	7/10/2014
N012863-029B	BGS-47-059-Q3	Groundwater	7/2/2014 12:38:00 PM	7/2/2014	7/10/2014
N012863-030A	99-05-059-Q3	Groundwater	7/2/2014 10:51:00 AM	7/2/2014	7/10/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012863
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012863-030B	99-05-059-Q3	Groundwater	7/2/2014 10:51:00 AM	7/2/2014	7/10/2014
N012863-031A	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/10/2014
N012863-031B	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/10/2014
N012863-032A	MW-871-059-Q3	Groundwater	7/2/2014 3:00:00 PM	7/2/2014	7/10/2014



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-001

Client Sample ID: 02-21-059-Q3
Collection Date: 7/2/2014 3:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-002

Client Sample ID: 02-26-059-Q3
Collection Date: 7/2/2014 3:16:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-003

Client Sample ID: 06-20-059-Q3
Collection Date: 7/2/2014 11:10:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-004

Client Sample ID: 16N-01-059-Q3
Collection Date: 7/2/2014 8:49:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-005

Client Sample ID: 21-02-059-Q3
Collection Date: 7/2/2014 3:55:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-006

Client Sample ID: 21-03-059-Q3
Collection Date: 7/2/2014 3:32:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-007

Client Sample ID: 21N-02-059-Q3
Collection Date: 7/2/2014 12:20:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-008

Client Sample ID: 21N-04-059-Q3
Collection Date: 7/2/2014 10:41:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7	ÚÓÁ&@K ()-, %				Ú!^] Óæ^	+# #B\$%	Qç æ^ •dK79=
Ó@[{ ā{	I È €ÈÈÈ		FÈÈ		µ* È	F	Ï ðÈÈÈÍ ÁÈÈÈÍ ÁÚ

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
 Lab Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW
 Lab ID: N012863-009

Client Sample ID: 22-69-059-Q3
 Collection Date: 7/2/2014 8:03:00 AM
 Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
<9L5J5 @BH7 <FCA# A'6M# f@CK' @J9 @							
				9D5`&%`*`			
Ü` }ÖK #`%\$`\$+\$`5	ÚÓÁÖ&&@K F-(\$&)			Ú!^] Ö&æ`			ÖË æ` •dKF6
P^c&æ^` öÓ@[{ ã{	€FÍ €€FG	€€€ €		µ* Æ	F		Ï ðÖÖFI ÁGKÁÚT
<9L5J5 @BH7 <FCA# A'6M#							
				9D5`&%`*`			
Ü` }ÖK #`*S`\$`\$+\$`5	ÚÓÁÖ&&@K F-(\$&%)			Ú!^] Ö&æ`			ÖË æ` •dKF6
P^c&æ^` öÓ@[{ ã{	pÖ €€FÍ	€€€		µ* Æ	F		Ï ðÖÖFI ÁGKÁÚT
8-GGC @98`A9H5 @G'6M# DIAG							
	9D5`\$`\$`\$5			9D5`*`\$&\$			
Ü` }ÖK #`D+S`\$`\$+\$`7	ÚÓÁÖ&&@K ()-, \$			Ú!^] Ö&æ`			ÖË æ` •dK79=
Ö@[{ ã{	pÖ €€HE	FEE		µ* Æ	F		Ï ðÖÖFI ÁGKÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-012

Client Sample ID: 27-48-059-Q3
Collection Date: 7/2/2014 7:51:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`*S%\$+\$' 5 P^caçç^} ó@[{ ã{	ÚÓÁó&&@K F-(\$&% €İ G €€Fİ		€€€		Ú!^} Óæ^ µ* È	F	Çğ æ^ •dKF6 İ ĐĐĐĐĐİ Áİ İEĞÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7 Ó@[{ ã{	ÚÓÁó&&@K ()-, \$ ĐÖ €€E€		FÈE		Ú!^} Óæ^ µ* È	+ # #B\$% F	Çğ æ^ •dK79= İ ĐĐĐĐĐİ ÁEJİEJÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-013

Client Sample ID: 27-49-059-Q3
Collection Date: 7/2/2014 7:40:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`*S%\$+\$' 5	ÚÓÁ&@K F-(\$&%				Ú!^] Óæ^		Qç æ^ •dKF6
P^cææ^} ó@[{ ā{	FÈ €ÈÈÍ		€È€		µ* È	F	Ï ðÈÈÈÈÈ ÁÈÍ KGGÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7	ÚÓÁ&@K ()-, \$				Ú!^] Óæ^	+# #È\$%4	Qç æ^ •dK79=
Ó@[{ ā{	FÈ €ÈÈÈ		FÈÈ		µ* È	F	Ï ðÈÈÈÈÈ ÁÈÍ ÈÈÈÈÈÈ ÁÚT

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-015

Client Sample ID: 28-17-059-Q3
Collection Date: 7/2/2014 11:06:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`S%\$+\$' 5	ÚÓÁ&@K F-(\$&%			Ú!^] Óæ			Qç æ`•dKF6
P^ææ^} ó@[{ ā{	€È €ÈÈÍ	€È€	€È€	μ* È		F	Ï ðÈÈÈÈÈ ÁÈ KGFÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7	ÚÓÁ&@K ()-, %			Ú!^] Óæ		+#`#&\$%	Qç æ`•dK79=
Ó@[{ ā{	þÖ €ÈÈÈ	ÈÈÈ	ÈÈÈ	μ* È		F	Ï ðÈÈÈÈÈ ÁÈÈÈÈÈÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-016

Client Sample ID: 28-66-059-Q3
Collection Date: 7/2/2014 2:44:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$+5	ÚÓÁ&@K F-(\$&				Ú!^] Öæ^		Öÿ æ^ •dKF6
P^ææ^} ó@[{ ã{	GË €€€Í	€€€	€€€		µ^ Æ	F	Ï ðææí ÁFFKí ÁÚ

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7D+S%\$+\$' 7	ÚÓÁ&@K ()-, %				Ú!^] Öæ^	+# #&\$%	Öÿ æ^ •dK79=
Ó@[{ ã{	GË €€€€	F€€	F€€		µ^ Æ	F	Ï ðææí ÁFFKí ÁÚ

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-018

Client Sample ID: 28N-05-059-Q3
Collection Date: 7/2/2014 1:28:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`S%\$+\$' 5 P^caç^} ó@[{ ā{	ÚÓÁóas&@K F-(\$&% HÈ €€€FÍ	€€€€	€€€€	Ú!^} Óæ^	µ* È	F	Öç æ^ •dKF6 İ ð€€€Fİ ÁFİ KGFÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7 Ó@[{ ā{	ÚÓÁóas&@K ()-, % HÈ €€€€	€€€€	FÈ€	Ú!^} Óæ^	µ* È	+ # #B\$% F	Öç æ^ •dK79= İ ð€€€Fİ ÁFFKJÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-019

Client Sample ID: 33-25-059-Q3
Collection Date: 7/2/2014 1:16:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`*S%\$+\$' 5	ÚÓÁ&@K F-(\$&%				Ú!^] Óæ		Qç æ`•dKF6
P^ææ^} ó@[{ ā{	€İ İ €€Fİ	€€€	€€€		µ* Ę	F	İ ĐĐĐFİ Áİ İEFÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7	ÚÓÁ&@K ()-, %				Ú!^] Óæ	+#`#&\$%	Qç æ`•dK79=
Ó@[{ ā{	GÈ €€È€	FÈÈ	FÈÈ		µ* Ę	F	İ ĐĐĐFİ ÁFFKÍ ÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-020

Client Sample ID: 33-26-059-Q3
Collection Date: 7/2/2014 12:36:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7`S%\$+\$' 5	ÚÓÁ&@K F-(\$&%			Ú!^] Óæ			Qj æ`•dKF6
P^ææ^} Ó@[{ ā{	€€€ €€€€	€€€	€€€	μ* È		F	Ï ðÈÈFI Åi KGFÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&\$

Ü` }ØK 7`D+S%\$+\$' 7	ÚÓÁ&@K ()-, %			Ú!^] Óæ		+#`#&\$%	Qj æ`•dK79=
Ó@[{ ā{	þÖ €€€€	€€€	€€€	μ* È		F	Ï ðÈÈFI Åi KGFÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-021

Client Sample ID: 33-27-059-Q3
Collection Date: 7/2/2014 10:36:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caçç^} ðÓ@[{ ã{	ÙÒÁÓ&@K F-(\$&& FË €€€Í	€€€	€€€	Ú!^} Óæ^	µ^ Ë	F	ÖË æ^ •dKF6 Ï ð€€€FI Á€FGGÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ã{	ÙÒÁÓ&@K (-, % FË €€€€	€€€€	FË€	Ú!^} Óæ^	µ^ Ë	+ # \$&\$% F	ÖË æ^ •dK79= Ï ð€€€FI Á€GFI Á€FI
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-022

Client Sample ID: 33-30-059-Q3
Collection Date: 7/2/2014 10:11:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caç^} ó@[{ ā{	ÚÓÁó&&@K F-(\$&& €İİ €€€İ	€€€	€€€	Ú!^} Óæ^	µ^ Ę	F	Ůæ æ^ •dKF6 İ ĐĐĐĐĐİ Á€KÍ FÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ā{	ÚÓÁó&&@K ()-, \$ ĐÖ €€€€	€€€€	F€€	Ú!^} Óæ^	µ^ Ę	+ # #&\$% F	Ůæ æ^ •dK79= İ ĐĐĐĐĐİ Á€KÍ ÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-023

Client Sample ID: 33N-02-059-Q3
Collection Date: 7/2/2014 12:01:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caçç^} ðÓ@[{ ã{	ÛÔÁÓ&@K F-(\$&& HË €€€Í	€€€	€€€	Ú!^} Óæ^	µ^ Ë	F	ÖË æ^ •dKF6 Ï ð€€€FI ÁEGKJÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ô@[{ ã{	ÛÔÁÓ&@K ()-, % HË €€€€	€€€	F€€	Ú!^} Óæ^	µ^ Ë	+ # #&\$% F	ÖË æ^ •dK79= Ï ð€€€FI ÁFGGÁCF
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-025

Client Sample ID: 36-25-059-Q3
Collection Date: 7/2/2014 9:02:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caçç^} ó@[{ ā{	ÚÓÁóas&@K F-(\$&& FË €€€FÍ €€€			Ú!^} Óæ^	µ^ È	F	Öç æ^ •dKF6 Ï ððççfi Á€HKÍ ÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ā{	ÚÓÁóas&@K (-, \$ FË €€€€ €€€		FË	Ú!^} Óæ^	µ^ È	+ # #B\$% F	Öç æ^ •dK79= Ï ððççfi Á€JKÍ ÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-026

Client Sample ID: 36-26-059-Q3
Collection Date: 7/2/2014 10:41:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5	ÚÓÁ&@K F-(\$&&				Ú!^] Óæ^		Qj æ^ •dKF6
P^ææ^} Ó@[{ ā{	FÈ €€€Í	€€€	€€€		µ^ È	F	Ï ð€€€Í Á€KÍ ÁÚT

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7	ÚÓÁ&@K ()-, %				Ú!^] Óæ^	+ # #&\$%&	Qj æ^ •dK79=
Ó@[{ ā{	FÈ €€€€	FÈ€	FÈ€		µ^ È	F	Ï ð€€€Í ÁFGd ÁCF

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-027

Client Sample ID: 36-43-059-Q3
Collection Date: 7/2/2014 10:20:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5	ÚÓÁ&@K F-(\$&&				Ú!^] Óæ^		Qç æ^ •dKF6
P^ææ^} ó@[{ ā{	€H €EFÍ	€E€			μ* È	F	Ï DEEFÍ ÁHKÍ ÁÚT

8-GGC @98`A9H5 @G'6M7 D!AG

9D5` '\$%\$5

9D5`* '\$&&

Ü` }ØK 7D+S%\$+\$' 7	ÚÓÁ&@K ()-, \$				Ú!^] Óæ^	+# #B\$%	Qç æ^ •dK79=
Ó@[{ ā{	þÖ €E€	FÈ			μ* È	F	Ï DEEFÍ ÁEJK GÁÚT

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-028

Client Sample ID: BGS-27-059-Q3
Collection Date: 7/2/2014 9:47:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caç^} ó@[{ ā{	ÚÓÁó&&@K F-(\$&& €G €€FÍ	€€€	€€€	Ú!^} Óæ^	µ* Ë	F	Öç æ^ •dKF6 İ ð€€Fİ ÁEİ KEGÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ā{	ÚÓÁó&&@K ()-, \$ pÖ €€€€	€€€	F€€	Ú!^} Óæ^	µ* Ë	+ # #&\$% F	Öç æ^ •dK79= İ ð€€Fİ ÁEJ KÌ ÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-029

Client Sample ID: BGS-47-059-Q3
Collection Date: 7/2/2014 12:38:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5	ÚÓÁ&@K F-(\$&&				Ú!^] Óæ^		Qj æ^ •dKF6
P^ææ^} Ó@[{ ā{	FÈ €ÈÈÌ	€È€	€È€		µ^ È	F	Ï ðÈÈÈÌ ÁÈ Í ÈÁÚ

8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7	ÚÓÁ&@K (-, %				Ú!^] Óæ^	+# #B\$%	Qj æ^ •dK79=
Ó@[{ ā{	FÈ €ÈÈÈ	FÈÈ	FÈÈ		µ^ È	F	Ï ðÈÈÈÌ ÁÈÈÈÌ ÁÈÈÈ

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
 Lab Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW
 Lab ID: N012863-030

Client Sample ID: 99-05-059-Q3
 Collection Date: 7/2/2014 10:51:00 AM
 Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caç^} ðÓ@[{ ã{	ÙÓÁÓ&&@K F-(\$&& I ÈH €€€FÌ		€€€€		Ú!^} Óæ^ µ* ÈŠ	F	Øç æ^ •dKF6 Ï ðÈÈFI ÁEÍ KEJÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5``\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ã{	ÙÓÁÓ&&@K ()-, % I ÈÈ €€€€		FÈÈ		Ú!^} Óæ^ µ* ÈŠ	+ # #B\$% F	Øç æ^ •dK79= Ï ðÈÈFI ÁFGKUÁCF
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-031

Client Sample ID: 99-12-059-Q3
Collection Date: 7/2/2014 10:45:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA4 A'6M7

9D5`&%`*`

Ü` }ØK 7+S%\$+\$' 5 P^caçç^} ó@[{ ā {	ÚÓÁóas&@K F-(\$&& FË €€€Í €€€			Ú!^} Óæ^	µ^ Ë	F	Öç æ^ •dKF6 Ï ð€€€Í ÁÍ KÍ ÁÚT
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8-GGC @ 98`A9H5 @G'6M7 D!AG

9D5`*`\$%\$5

9D5`*`\$&&

Ü` }ØK 7D+S%\$+\$' 7 Ó@[{ ā {	ÚÓÁóas&@K ()-, % FË €€€€ FË€		FË€	Ú!^} Óæ^	µ^ Ë	+ # \$&\$% F	Öç æ^ •dK79= Ï ð€€€Í ÁÍ KÍ ÁÚT
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Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 09-Jul-14

CLIENT: CH2M HILL
Lab Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012863-032

Client Sample ID: MW-871-059-Q3
Collection Date: 7/2/2014 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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<9L5J5 @BH7 <FCA# A'6M# f@CK' @J9 @

9D5`&%`*`

Ü` }ØK 7%8% \$+\$+5	ÚÓÁ&@K F-(\$&)			Ú!^] Ó&^			Q& æ`•dKF6
P^c&æ^} ó@[{ ã{	pÖ €€FG		€€€ €		µ* Æ	F	İ Đ Đ€FI Á€KJÁÚT

<9L5J5 @BH7 <FCA# A'6M#

9D5`&%`*`

Ü` }ØK 7+S% \$+\$' 5	ÚÓÁ&@K F-(\$&&)			Ú!^] Ó&^			Q& æ`•dKF6
P^c&æ^} ó@[{ ã{	pÖ €€FÍ		€€€		µ* Æ	F	İ Đ Đ€FI Á€ KÍ ÁÚT

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Úä] ^ÁÖ A 6IF- (\$&)	Úä] ^ ÁK A 6 @	V^• d[á^K&%™ SK S@@ Wj áK ±[#@	Ú ^] ÁÖæ^K	Û^} P[K - (\$&)
Ó á} óÁÖK D6 K	Óæ&@ÁÖK F- (\$&)	V^• d[K9 D5` &%™	Qj á^• á ÁÖæ^K ##-#&\$%{	Û^} P[K % \$\$* %
Qj á^•	Û^• c	ÚÚŠ ÚÚSÁçá^ ÚÚSÁÛ^ Áxá	Á ÚÖÖ Š , Šá æ Pá Qš æ ÚÚÖÁÛ^ Áxá	Á ÚÚÖ ÚÚÖŠá æ Ú^ á

P^çæçá^} óÁ@[{ á { PÖ €€€ €

Úä] ^ÁÖ @ GIF- (\$&)	Úä] ^ ÁK @ G	V^• d[á^K&%™ SK S@@ Wj áK ±[#@	Ú ^] ÁÖæ^K	Û^} P[K - (\$&)
Ó á} óÁÖK @ GK	Óæ&@ÁÖK F- (\$&)	V^• d[K9 D5` &%™	Qj á^• á ÁÖæ^K ##-#&\$%{	Û^} P[K % \$\$* %
Qj á^•	Û^• c	ÚÚŠ ÚÚSÁçá^ ÚÚSÁÛ^ Áxá	Á ÚÖÖ Š , Šá æ Pá Qš æ ÚÚÖÁÛ^ Áxá	Á ÚÚÖ ÚÚÖŠá æ Ú^ á

P^çæçá^} óÁ@[{ á { €€€ H €€€ € €€€€€ € JFH J€ FFE

Úä] ^ÁÖ B\$%&, **!\$\$- 5 8 I D	Úä] ^ ÁK 8 I D	V^• d[á^K&%™ SK S@@ Wj áK ±[#@	Ú ^] ÁÖæ^K	Û^} P[K - (\$&)
Ó á} óÁÖK NNNNNN	Óæ&@ÁÖK F- (\$&)	V^• d[K9 D5` &%™	Qj á^• á ÁÖæ^K ##-#&\$%{	Û^} P[K % \$\$* &%
Qj á^•	Û^• c	ÚÚŠ ÚÚSÁçá^ ÚÚSÁÛ^ Áxá	Á ÚÖÖ Š , Šá æ Pá Qš æ ÚÚÖÁÛ^ Áxá	Á ÚÚÖ ÚÚÖŠá æ Ú^ á

P^çæçá^} óÁ@[{ á { €€€ Í €€€ € €€€€€ €€€ Í G Q€€ Q€

Úä] ^ÁÖ B\$%&, **!\$\$- 5 A G	Úä] ^ ÁK A G	V^• d[á^K&%™ SK S@@ Wj áK ±[#@	Ú ^] ÁÖæ^K	Û^} P[K - (\$&)
Ó á} óÁÖK NNNNNN	Óæ&@ÁÖK F- (\$&)	V^• d[K9 D5` &%™	Qj á^• á ÁÖæ^K ##-#&\$%{	Û^} P[K % \$\$* &&
Qj á^•	Û^• c	ÚÚŠ ÚÚSÁçá^ ÚÚSÁÛ^ Áxá	Á ÚÖÖ Š , Šá æ Pá Qš æ ÚÚÖÁÛ^ Áxá	Á ÚÚÖ ÚÚÖŠá æ Ú^ á

P^çæçá^} óÁ@[{ á { €€€ H €€€ € €€€€€ €€€ Í G Jİİ J€ FFE

Úä] ^ÁÖ B\$%&, **!\$\$- 5 A G8	Úä] ^ ÁK A G8	V^• d[á^K&%™ SK S@@ Wj áK ±[#@	Ú ^] ÁÖæ^K	Û^} P[K - (\$&)
Ó á} óÁÖK NNNNNN	Óæ&@ÁÖK F- (\$&)	V^• d[K9 D5` &%™	Qj á^• á ÁÖæ^K ##-#&\$%{	Û^} P[K % \$\$* &'
Qj á^•	Û^• c	ÚÚŠ ÚÚSÁçá^ ÚÚSÁÛ^ Áxá	Á ÚÖÖ Š , Šá æ Pá Qš æ ÚÚÖÁÛ^ Áxá	Á ÚÚÖ ÚÚÖŠá æ Ú^ á

P^çæçá^} óÁ@[{ á { €€€ Í €€€ € €€€€€ €€€ Í G JHİ J€ FFE €€€ İ HF Q€İ Q€

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Úæ] ^ÁÖ B\$%&, ** ! \$' &5 A G	Úæ] V^] ^K A G	V^• cÔ[á^K&% " * SK S@@ W, æ K ±[#@	Ú!^] ÁÖæ^K	Ü^ } P[K - (\$&)
Ô ã} áÖK NNNNNN	Óæ&@ÖK F- (\$&)	V^• ç[K9 D5 ` &% " *	Öj æ^ • ä ÁÖæ^K +##-#&\$%	Ü^ } P[K % \$\$* &)
Öj æ^ ç	Ú^• ^ c	ÚÚŠ ÚÚSÁçæ^ ^ ÚÚSÁÜ^ -ÁXæ	Á ÚÖÖ Š, Šã æ Pã Öã æ ÚÚÖÁÜ^ -ÁXæ	Ä ÚÚÖ ÚÚÖŠã æ Ú^ æ
P^ çæç^} áÖ@[{ ä {	€€€€	€€€ € €€€€€	€ F€G J€ F€€	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁÖ A 6IF- (\$&%	Úæ] ^ ÁK A 6 @	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^ } P[K - (\$&%
Ó á) óÖK D6 K	Óæ&@ÖK F- (\$&%	V^• d[K9D5`&% *	Q; æ`• á ÁÖæ^K + # #B\$%4	Û^ } P[K % \$\$ (, ,
Q; æ`•	Û^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^ ÁXæ`	Á ÚÖÖ Š, Šá æ Pá Öšá æ ÚÚÖÁÛ^ ÁXæ`	Á ÚÚÖ ÚÚÖŠá æ Û^ æ`

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Úæ] ^ÁÖ @ GIF- (\$&%	Úæ] ^ ÁK @ G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^ } P[K - (\$&%
Ó á) óÖK @ GK	Óæ&@ÖK F- (\$&%	V^• d[K9D5`&% *	Q; æ`• á ÁÖæ^K + # #B\$%4	Û^ } P[K % \$\$ (- ,
Q; æ`•	Û^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^ ÁXæ`	Á ÚÖÖ Š, Šá æ Pá Öšá æ ÚÚÖÁÛ^ ÁXæ`	Á ÚÚÖ ÚÚÖŠá æ Û^ æ`

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I ÆHE €É€ Í É€€ € JÌ È J€ FFE

Úæ] ^ÁÖ B\$%&, ** !\$\$%5! 8 I D	Úæ] ^ ÁK 8 I D	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^ } P[K - (\$&%
Ó á) óÖK NNNNNN	Óæ&@ÖK F- (\$&%	V^• d[K9D5`&% *	Q; æ`• á ÁÖæ^K + # #B\$%4	Û^ } P[K % \$\$ (- %
Q; æ`•	Û^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^ ÁXæ`	Á ÚÖÖ Š, Šá æ Pá Öšá æ ÚÚÖÁÛ^ ÁXæ`	Á ÚÚÖ ÚÚÖŠá æ Û^ æ`

P^çæçæ) óÖ@[{ á {

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Úæ] ^ÁÖ B\$%&, ** !\$\$%5! A G	Úæ] ^ ÁK A G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^ } P[K - (\$&%
Ó á) óÖK NNNNNN	Óæ&@ÖK F- (\$&%	V^• d[K9D5`&% *	Q; æ`• á ÁÖæ^K + # #B\$%4	Û^ } P[K % \$\$ (- &
Q; æ`•	Û^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^ ÁXæ`	Á ÚÖÖ Š, Šá æ Pá Öšá æ ÚÚÖÁÛ^ ÁXæ`	Á ÚÚÖ ÚÚÖŠá æ Û^ æ`

P^çæçæ) óÖ@[{ á {

FÈ FÍ €É€ FÉ€€ €È Í HÍ JÌ È J€ FFE

Úæ] ^ÁÖ B\$%&, ** !\$\$%5! A G	Úæ] ^ ÁK A G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^ ÁÖæ^K	Û^ } P[K - (\$&%
Ó á) óÖK NNNNNN	Óæ&@ÖK F- (\$&%	V^• d[K9D5`&% *	Q; æ`• á ÁÖæ^K + # #B\$%4	Û^ } P[K % \$\$ (- (
Q; æ`•	Û^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁÛ^ ÁXæ`	Á ÚÖÖ Š, Šá æ Pá Öšá æ ÚÚÖÁÛ^ ÁXæ`	Á ÚÚÖ ÚÚÖŠá æ Û^ æ`

P^çæçæ) óÖ@[{ á {

FÈÇ F €É€ FÉ€€ €ÈÇ HÍ JÌ È J€ FFE

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁŦ B\$%&, ** !\$\$+5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^] ÁŦæ^K	Û^} P[K - (\$&%
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&%	V^• d[K9D5`&% *	Ŧæ`• á ÁŦæ^K + # #B\$%\$	Û^} P[K % \$ \$) \$+
Ŧæ` �	Û^• c	ÚÚŠ ÚÚSÁçæ^ ÚÚSÁŦ^ ÁXæ	Á ÚŦŦ Š, Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ	Á ÚÚŦ ÚÚŦŦšá æ Ú^ æ
P^çæçæ) áŦ@[{ á {	HĪ Ī Ī	ĒĒĒ	FĒĒĒ	GĒ Ī Ī
		FĒF	JĒ	FFĒ

Úæ] ^ÁŦ B\$%&, ** !\$\$-5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^] ÁŦæ^K	Û^} P[K - (\$&%
Ó á) áŦK NNNNNN	Óæ&@ŦK F- (\$&%	V^• d[K9D5`&% *	Ŧæ`• á ÁŦæ^K + # #B\$%\$	Û^} P[K % \$ \$) %&
Ŧæ` �	Û^• c	ÚÚŠ ÚÚSÁçæ^ ÚÚSÁŦ^ ÁXæ	Á ÚŦŦ Š, Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ	Á ÚÚŦ ÚÚŦŦšá æ Ú^ æ
P^çæçæ) áŦ@[{ á {	FĒĪ Ī	ĒĒĒ	FĒĒĒ	ĒĒĪ HH
		FĒF	JĒ	FFĒ

Úæ] ^ÁŦ B\$%&, ** !\$\$%5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% * SK D; 9 W; á K ±[#@	Ú ^] ÁŦæ^K	Û^} P[K - (\$&%
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Ŧæ` �	Û^• c	ÚÚŠ ÚÚSÁçæ^ ÚÚSÁŦ^ ÁXæ	Á ÚŦŦ Š, Šá æ Pá Ŧšá æ ÚÚŦÁŦ^ ÁXæ	Á ÚÚŦ ÚÚŦŦšá æ Ú^ æ
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁÖ B\$%&, ** !\$\$5!A G	Úæ] ^] ^K A G	V^• d[á^K&% " SK D; 9 W; æ K ±[#@	Ú!^] ÁÖæ^K	Ü^ } P[K - (\$&%
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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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Úæ]V^ Á 6 1F- (\$&&	Úæ]V^ ^K A 6 @	V^• d[á^K&&% * SK D; 9 W; á K ±[#@	Ú!^ ÁÖæ^K	Û^ } P[K - (\$&&
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Úæ]V^ Á B\$%&, ** ! \$&&% 1 A G	Úæ]V^ ^K A G	V^• d[á^K&&% * SK D; 9 W; á K ±[#@	Ú!^ ÁÖæ^K	Û^ } P[K - (\$&&
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Úæ] ^ÁŦ B\$%&, ** !\$\$5!A G8	Úæ] ^ ÁK A G8	V^• d[á^K&% " SK D; 9 W_ ã K ±[#@	Ú ^] ÁŦæ^K
Ó ã) áŦK NNNNNN	Óæ&@ŦK F- (\$&&	V^• d[K9 D5` &% " "	Ŧæ`• ã ÁŦæ^K + # #B\$%\$
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P^çæçæ) áŦ@[{ ã {	FĚ Jì	ĚĚĚ FĚĚĚ ĚĚ Ĩ Ĩ	JĚ FĚĚ FĚĚ ĚĚ Ĩ ĚĚ

Úæ] ^ÁŦ B\$%&, ** !\$\$' 5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% " SK D; 9 W_ ã K ±[#@	Ú ^] ÁŦæ^K
Ó ã) áŦK NNNNNN	Óæ&@ŦK F- (\$&&	V^• d[K9 D5` &% " "	Ŧæ`• ã ÁŦæ^K + # #B\$%\$
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Úæ] ^ÁŦ B\$%&, ** !\$\$ (5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% " SK D; 9 W_ ã K ±[#@	Ú ^] ÁŦæ^K
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Ŧæ` ç	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šã ã Pã Ŧã ã ÚÚŦÁŦ^ ÁXæ`
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Úæ] ^ÁŦ B\$%&, ** !\$\$* 5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% " SK D; 9 W_ ã K ±[#@	Ú ^] ÁŦæ^K
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Ŧæ` ç	Ú^•` c	ÚÚŠ ÚÚSÁçæ`^ ÚÚSÁŦ^ ÁXæ`	Á ÚŦŦ Š , Šã ã Pã Ŧã ã ÚÚŦÁŦ^ ÁXæ`
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Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
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Úæ] ^ÁŦ B\$%&, ** ! \$&+5!A G	Úæ] ^ ÁK A G	V^• d[á^K&% " SK D; 9 W_ á K ±[#@	Ú ^ ÁŦæ^K	Û^ } P[K - (\$&&
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Úæ] ^ÁŦ B\$%&, ** ! \$' %!A G	Úæ] ^ ÁK A G	V^• d[á^K&% " SK D; 9 W_ á K ±[#@	Ú ^ ÁŦæ^K	Û^ } P[K - (\$&&
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Qualifiers:

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CLIENT: CH2M HILL
Work Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012863
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly / 500 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C / HNO3, 4°C Filtered: Field / Field Holding Time (days): 28 / 180		Cr(M) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS		
SAMPLE ID	DATE	TIME	Matrix							
02-21-059-Q3	7/02/14	1551	GW	X	X	NO 2863-1 ↓	PGE	2		
02-26-059-Q3	7/02/14	1516	GW	X	X		-2	Hinkley Community Center	2	
06-20-059-Q3	7/02/14	1110	GW	X	X		-3	Smith	2	
16N-01-059-Q3	7/02/14	0849	GW	X	X		-4	Carrillo	2	
21-02-059-Q3	7/02/14	1555	GW	X	X		-5	PGE (Former Simmons)	2	
21-03-059-Q3	7/02/14	1532	GW	X	X		-6	PGE (Former Simmons)	2	
21N-02-059-Q3	7/02/14	1220	GW	X	X		-7	Navarrete	2	
21N-04-059-Q3	7/02/14	1041	GW	X	X		-8	Loaiza	2	
22-69-059-Q3	7/02/14	0803	GW	X	X		-9	Nelson	2	
27-26-059-Q3	7/02/14	1035	GW	X	X		-10	Preciado	2	
27-42-059-Q3	7/02/14	0811	GW	X	X		-11	Hinkley Bible Church	2	
27-48-059-Q3	7/02/14	0751	GW	X	X		-12	Leyerly	2	
27-49-059-Q3	7/02/14	0740	GW	X	X		-13	Leyerly	2	
28-16-059-Q3	7/02/14	0947	GW	X	X		-14	Ruiz	2	
28-17-059-Q3	7/02/14	1106	GW	X	X		-15	Ohai	2	
TOTAL NUMBER OF CONTAINERS								63		

Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>		Date/Time: 07/02/14 1657 Date/Time: 07/02/14 Date/Time: 07/02/14 1658 Date/Time: 7/2/14 1700 Date/Time: 7/2/14 1930 Date/Time: 7/2/14 1930		Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3-5°C / 5-5°C Airbill No: 1P#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Containers: 250 ml Poly (NH4)2, SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C		Preservatives: Filtered: Holding Time (days):		C(VV) (E218.6) FF Metals Dissolved (6020A/FF) FF Cr	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix								
28-66-059-Q3	7/02/14	1444	GW	X	X			N012863-16	PGE (Former Diaz)	2	
28N-04-059-Q3	7/02/14	1258	GW	X	X			-17	Aguayo	2	
28N-05-059-Q3	7/02/14	1328	GW	X	X			-18	Aguayo	2	
33-25-059-Q3	7/02/14	1316	GW	X	X			-19	Ohai	2	
33-26-059-Q3	7/02/14	1236	GW	X	X			-20	Ohai	2	
33-27-059-Q3	7/02/14	1036	GW	X	X			-21	Cruz	2	
33-30-059-Q3	7/02/14	1011	GW	X	X			-22	Vargas	2	
33N-02-059-Q3	7/02/14	1201	GW	X	X			-23	Ohai	2	
36-17-059-Q3	7/02/14	1001	GW	X	X			-24	Harmsen	2	
36-25-059-Q3	7/02/14	0902	GW	X	X			-25	Baca	2	
36-26-059-Q3	7/02/14	1041	GW	X	X			-26	Lara	2	
36-43-059-Q3	7/02/14	1020	GW	X	X			-27	Harmsen	2	
BGS-27-059-Q3	7/02/14	0947	GW	X	X			-28	Harmsen	2	
BGS-47-059-Q3	7/02/14	1238	GW	X	X			-29	Modica	2	
99-05-059-Q3	7/02/14	1051	GW	X	X			-30		2	
TOTAL NUMBER OF CONTAINERS										63	

Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>	Signatures Date/Time 07/02/14 1657 07/02/14/1657 07/02/14 1658 7/2/14 AB 7/2/14 1930 7/2/14 1930	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.6°C Airbill No: 1242 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012863-009A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.158193 * 1 \\ &= 0.158193\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.16}$$

Nancy 7/9/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012863-004A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 3.4406 * 1 \\ &= 3.4406\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 3.4$$

Nancy 7/9/2014

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CLIENT: CH2M HILL
 Work Order: N012863
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

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Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

July 16, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012864

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 02, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012864

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Arsenic possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 16-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012864
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012864-001A	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/16/2014
N012864-001B	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/16/2014
N012864-001C	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/16/2014
N012864-001D	22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	7/2/2014	7/16/2014
N012864-002A	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/16/2014
N012864-002B	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/16/2014
N012864-002C	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/16/2014
N012864-002D	27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	7/2/2014	7/16/2014
N012864-003A	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/16/2014
N012864-003B	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/16/2014
N012864-003C	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/16/2014
N012864-003D	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/16/2014
N012864-003E	36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	7/2/2014	7/16/2014
N012864-004A	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/16/2014
N012864-004B	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/16/2014
N012864-004C	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/16/2014
N012864-004D	99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	7/2/2014	7/16/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-69-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 8:03:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

WETCHEM_140707D	45993					7/7/2014	LCC
					*	F	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-26-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:35:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

WETCHEM_140707D	45993					7/7/2014	LCC
						F	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

WETCHEM_140707D	45993					7/7/2014	LCC
						F	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-12-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:45:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

WETCHEM_140707D	45993					7/7/2014	LCC
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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
 Work Order: N012864
 Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Úæ] ÁÄ MB-45993	Úæ] V´] ^K MBLK	V^• d[á^K 160.1_2540C	Wj æ K mg/L	Ú!^] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94032
Ó æ} dÄK PBW	Óæ&@ÄK 45993	V^• d[KSM2540C		Öj æ´• ä ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800776
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Úæ] ÁÄ LCS-45993	Úæ] V´] ^K LCS	V^• d[á^K 160.1_2540C	Wj æ K mg/L	Ú!^] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94032
Ó æ} dÄK LCSW	Óæ&@ÄK 45993	V^• d[KSM2540C		Öj æ´• ä ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800777
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Úæ] ÁÄ N012864-001C-DUP	Úæ] V´] ^K DUP	V^• d[á^K 160.1_2540C	Wj æ K mg/L	Ú!^] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94032
Ó æ} dÄK ZZZZZZ	Óæ&@ÄK 45993	V^• d[KSM2540C		Öj æ´• ä ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800781
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-69-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 8:03:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

ICP7_140703C	45976	7/3/2014	C&I
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Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-26-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:35:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

ICP7_140703C	45976					7/3/2014	C&I
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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-12-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:45:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012864
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Úæ] ÁÄ MB-45976	Úæ] V´] ^K MBLK	V^• d[á^K 200.8DIS_U_ Wj ã K pCi/L	Ú:~] ÁÖæ^K 7/3/2014	Ü´} Þ[K 94018
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Úæ] ÁÄ LCS-45976	Úæ] V´] ^K LCS	V^• d[á^K 200.8DIS_U_ Wj ã K pCi/L	Ú:~] ÁÖæ^K 7/3/2014	Ü´} Þ[K 94018
Ó ã} óÄK LCSW	Óæ&@ÄK 45976	V^• d[KEPA 200.8	Çæ´•ã ÁÖæ^K 7/3/2014	Ü^´ Þ[K 1800086
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Úæ] ÁÄ N012858-001A-MS	Úæ] V´] ^K MS	V^• d[á^K 200.8DIS_U_ Wj ã K pCi/L	Ú:~] ÁÖæ^K 7/3/2014	Ü´} Þ[K 94018
Ó ã} óÄK ZZZZZZ	Óæ&@ÄK 45976	V^• d[KEPA 200.8	Çæ´•ã ÁÖæ^K 7/3/2014	Ü^´ Þ[K 1800090
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Úæ] ÁÄ N012858-001A-MSD	Úæ] V´] ^K MSD	V^• d[á^K 200.8DIS_U_ Wj ã K pCi/L	Ú:~] ÁÖæ^K 7/3/2014	Ü´} Þ[K 94018
Ó ã} óÄK ZZZZZZ	Óæ&@ÄK 45976	V^• d[KEPA 200.8	Çæ´•ã ÁÖæ^K 7/3/2014	Ü^´ Þ[K 1800093
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-69-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 8:03:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

IC2_140703A	R94009						PS

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-26-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:35:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

IC2_140703A	R94009						PS

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

IC2_140703A	R94009						PS
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Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-12-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 10:45:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

IC2_140703A	R94009						PS

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012864
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Úä] ÁÄ MB-R94009_NO3 Ó]ä) áÄK PBW Çä ç' ç	Úä] V'] ^K MBLK Óä&@ÄK R94009 Ú^·]c	V^· ç] ä^K300WLLNO3 V^· ç] KEPA 300.0 ÚÚŠ ÚÚSÄçä^ ÚÚSÄÜ^Äçä	W] ä K mg/L KEPA 300.0 ÚÚSÄçä^ ÚÚSÄÜ^Äçä	Ú] ^] ÄÖä^K Çä ç' · ä ÄÖä^K 7/3/2014 Ä ÜÖÖ Š] , Šä ä Pä Çä ä ÜÜÖÄÜ^Äçä	Ü' } P[K 94009 Ú^· P[K 1799460 Ä ÜÜÖ ÜÜÖŠä ä Ü' ç					
Pä ä Ä Ä Ä Ä	PÖ	€€€ €								
Úä] ÁÄ LCS-R94009_NO3 Ó]ä) áÄK LCSW Çä ç' ç	Úä] V'] ^K LCS Óä&@ÄK R94009 Ú^·]c	V^· ç] ä^K300WLLNO3 V^· ç] KEPA 300.0 ÚÚŠ ÚÚSÄçä^ ÚÚSÄÜ^Äçä	W] ä K mg/L KEPA 300.0 ÚÚSÄçä^ ÚÚSÄÜ^Äçä	Ú] ^] ÄÖä^K Çä ç' · ä ÄÖä^K 7/3/2014 Ä ÜÖÖ Š] , Šä ä Pä Çä ä ÜÜÖÄÜ^Äçä	Ü' } P[K 94009 Ú^· P[K 1799461 Ä ÜÜÖ ÜÜÖŠä ä Ü' ç					
Pä ä Ä Ä Ä Ä	€€] i	€€€ €	F€€€ €	€	Ji ħ	J€	F€€			
Úä] ÁÄ N012864-001B-DUP Ó]ä) áÄK ZZZZZZ Çä ç' ç	Úä] V'] ^K DUP Óä&@ÄK R94009 Ú^·]c	V^· ç] ä^K300WLLNO3 V^· ç] KEPA 300.0 ÚÚŠ ÚÚSÄçä^ ÚÚSÄÜ^Äçä	W] ä K mg/L KEPA 300.0 ÚÚSÄçä^ ÚÚSÄÜ^Äçä	Ú] ^] ÄÖä^K Çä ç' · ä ÄÖä^K 7/3/2014 Ä ÜÖÖ Š] , Šä ä Pä Çä ä ÜÜÖÄÜ^Äçä	Ü' } P[K 94009 Ú^· P[K 1799463 Ä ÜÜÖ ÜÜÖŠä ä Ü' ç					
Pä ä Ä Ä Ä Ä	Ç€] €	€€€		Ç€] €	€€H	Ç€				
Úä] ÁÄ N012864-001B-MS Ó]ä) áÄK ZZZZZZ Çä ç' ç	Úä] V'] ^K MS Óä&@ÄK R94009 Ú^·]c	V^· ç] ä^K300WLLNO3 V^· ç] KEPA 300.0 ÚÚŠ ÚÚSÄçä^ ÚÚSÄÜ^Äçä	W] ä K mg/L KEPA 300.0 ÚÚSÄçä^ ÚÚSÄÜ^Äçä	Ú] ^] ÄÖä^K Çä ç' · ä ÄÖä^K 7/3/2014 Ä ÜÖÖ Š] , Šä ä Pä Çä ä ÜÜÖÄÜ^Äçä	Ü' } P[K 94009 Ú^· P[K 1799464 Ä ÜÜÖ ÜÜÖŠä ä Ü' ç					
Pä ä Ä Ä Ä Ä	i ħ i €	€€€	i €€€	Ç€] €	Ji ħ	i €	F€€			
Úä] ÁÄ N012864-001B-MSD Ó]ä) áÄK ZZZZZZ Çä ç' ç	Úä] V'] ^K MSD Óä&@ÄK R94009 Ú^·]c	V^· ç] ä^K300WLLNO3 V^· ç] KEPA 300.0 ÚÚŠ ÚÚSÄçä^ ÚÚSÄÜ^Äçä	W] ä K mg/L KEPA 300.0 ÚÚSÄçä^ ÚÚSÄÜ^Äçä	Ú] ^] ÄÖä^K Çä ç' · ä ÄÖä^K 7/3/2014 Ä ÜÖÖ Š] , Šä ä Pä Çä ä ÜÜÖÄÜ^Äçä	Ü' } P[K 94009 Ú^· P[K 1799465 Ä ÜÜÖ ÜÜÖŠä ä Ü' ç					
Pä ä Ä Ä Ä Ä	i ħ i i	€€€	i €€€	Ç€] €	Ji ħ	i €	F€€	i ħ i €	F€H	Ç€

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

Ü" }ÖK TOC2_140703A	ÛÔÁÖ&&@K R94013			Ú!^] Öæ^		Öÿ æ^ •dKPS	
U!* æ 3AÖæà[] ÉV[æ	pÖ €€ F	F€€	{ *€	F	Ï DEEFÍ ÁÍ KEÁÚT		

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012864
 Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Úæ] ÁÖ MB-R94013	Úæ] V´] ^K MBLK	V^• d[á^K 5310C_W_T	Wj ã K mg/L	Ú ^] ÁÖæ^K	Û´ } P[K 94013
Ó ã } ó ÁÖK PBW	Óæ&@ÁÖK R94013	V^• d[KSM 5310C		Qj æ´ • ã ÁÖæ^K 7/3/2014	Û^´ P[K 1799723
Qj æ´ ¸	Û^•´ c	ÚÚŠ	ÚÚSÁçæ´ ^ ÚÚSÁÛ^ ÁXæ´	Ã ÚÚÖ Š , Šä æ Pã Qš æ ÚÚÖÁÛ^ ÁXæ´	Ã ÚÚÖ ÚÚÖŠä æ Ú´ æ
U!´ æ ÁÖæá[] ÉV[æ	PÖ	FÈÈ			
Úæ] ÁÖ LCS-R94013	Úæ] V´] ^K LCS	V^• d[á^K 5310C_W_T	Wj ã K mg/L	Ú ^] ÁÖæ^K	Û´ } P[K 94013
Ó ã } ó ÁÖK LCSW	Óæ&@ÁÖK R94013	V^• d[KSM 5310C		Qj æ´ • ã ÁÖæ^K 7/3/2014	Û^´ P[K 1799724
Qj æ´ ¸	Û^•´ c	ÚÚŠ	ÚÚSÁçæ´ ^ ÚÚSÁÛ^ ÁXæ´	Ã ÚÚÖ Š , Šä æ Pã Qš æ ÚÚÖÁÛ^ ÁXæ´	Ã ÚÚÖ ÚÚÖŠä æ Ú´ æ
U!´ æ ÁÖæá[] ÉV[æ	FÈÈ J	FÈÈ	FÈÈÈ €	FÈF Í Í	FFÍ
Úæ] ÁÖ N012864-003D-MS	Úæ] V´] ^K MS	V^• d[á^K 5310C_W_T	Wj ã K mg/L	Ú ^] ÁÖæ^K	Û´ } P[K 94013
Ó ã } ó ÁÖK ZZZZZZ	Óæ&@ÁÖK R94013	V^• d[KSM 5310C		Qj æ´ • ã ÁÖæ^K 7/3/2014	Û^´ P[K 1799725
Qj æ´ ¸	Û^•´ c	ÚÚŠ	ÚÚSÁçæ´ ^ ÚÚSÁÛ^ ÁXæ´	Ã ÚÚÖ Š , Šä æ Pã Qš æ ÚÚÖÁÛ^ ÁXæ´	Ã ÚÚÖ ÚÚÖŠä æ Ú´ æ
U!´ æ ÁÖæá[] ÉV[æ	FÈÈ Í Í	FÈÈ	FÈÈÈ €È FÍ I	JÍ È	Í Í FG
Úæ] ÁÖ N012864-003D-MSD	Úæ] V´] ^K MSD	V^• d[á^K 5310C_W_T	Wj ã K mg/L	Ú ^] ÁÖæ^K	Û´ } P[K 94013
Ó ã } ó ÁÖK ZZZZZZ	Óæ&@ÁÖK R94013	V^• d[KSM 5310C		Qj æ´ • ã ÁÖæ^K 7/3/2014	Û^´ P[K 1799726
Qj æ´ ¸	Û^•´ c	ÚÚŠ	ÚÚSÁçæ´ ^ ÚÚSÁÛ^ ÁXæ´	Ã ÚÚÖ Š , Šä æ Pã Qš æ ÚÚÖÁÛ^ ÁXæ´	Ã ÚÚÖ ÚÚÖŠä æ Ú´ æ
U!´ æ ÁÖæá[] ÉV[æ	FÈÈ Í Í	FÈÈ	FÈÈÈ €È FÍ I	JGÈ	Í Í FG FÈÈ Í QÈ € QÈ

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

	EPA 3010A	EPA 6010B		
ICP2_140707B	45992		7/7/2014	C&I
			F	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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CLIENT: CH2M HILL
 Work Order: N012864
 Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Úæ] ÁÖ MB-45992	Úæ]V´] ^K MBLK	V^•ó[á^K6010WD_HIN	Wj ã K mg/L	Ú Á] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94019
Ó ã} óÁÖK PBW	Óæ&@ÁÖK 45992	V^•ó[KEPA 6010B	EPA 3010A	Çj æ´•ã ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800464
Çj æ´•	Ú^•´ c	ÚÚŠ	ÚÚSÁçæ´^ ÚÚSÁÜ^Áxæ	Ã ÚÚÖ Š[, Šq ã Pã Çšq ã ÚÚÖÁÜ^Áxæ	Ã ÚÚÖ ÚÚÖŠq ã Ú´ æ

Q| } €€€€ €€€€

Úæ] ÁÖ LCS-45992	Úæ]V´] ^K LCS	V^•ó[á^K6010WD_HIN	Wj ã K mg/L	Ú Á] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94019
Ó ã} óÁÖK LCSW	Óæ&@ÁÖK 45992	V^•ó[KEPA 6010B	EPA 3010A	Çj æ´•ã ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800465
Çj æ´•	Ú^•´ c	ÚÚŠ	ÚÚSÁçæ´^ ÚÚSÁÜ^Áxæ	Ã ÚÚÖ Š[, Šq ã Pã Çšq ã ÚÚÖÁÜ^Áxæ	Ã ÚÚÖ ÚÚÖŠq ã Ú´ æ

Q| } €€€€ €€€€ €€€€€ € € F€í |í F€í

Úæ] ÁÖ N012864-003A-MS	Úæ]V´] ^K MS	V^•ó[á^K6010WD_HIN	Wj ã K mg/L	Ú Á] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94019
Ó ã} óÁÖK ZZZZZZ	Óæ&@ÁÖK 45992	V^•ó[KEPA 6010B	EPA 3010A	Çj æ´•ã ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800471
Çj æ´•	Ú^•´ c	ÚÚŠ	ÚÚSÁçæ´^ ÚÚSÁÜ^Áxæ	Ã ÚÚÖ Š[, Šq ã Pã Çšq ã ÚÚÖÁÜ^Áxæ	Ã ÚÚÖ ÚÚÖŠq ã Ú´ æ

Q| } €€€€ €€€€ €€€€€ €€€€|í |í F€G |í F€G

Úæ] ÁÖ N012864-003A-MSD	Úæ]V´] ^K MSD	V^•ó[á^K6010WD_HIN	Wj ã K mg/L	Ú Á] ÁÖæ^K 7/7/2014	Ü´} Þ[K 94019
Ó ã} óÁÖK ZZZZZZ	Óæ&@ÁÖK 45992	V^•ó[KEPA 6010B	EPA 3010A	Çj æ´•ã ÁÖæ^K 7/7/2014	Ú^´ Þ[K 1800472
Çj æ´•	Ú^•´ c	ÚÚŠ	ÚÚSÁçæ´^ ÚÚSÁÜ^Áxæ	Ã ÚÚÖ Š[, Šq ã Pã Çšq ã ÚÚÖÁÜ^Áxæ	Ã ÚÚÖ ÚÚÖŠq ã Ú´ æ

Q| } €€€€ €€€€ €€€€€ €€€€|í |í F€G |í F€G €€€€ F H€€ G€

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 16-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-25-059-Q3
Lab Order: N012864	Collection Date: 7/2/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012864-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A		EPA 6020				
ICP7_140703C	45980				7/3/2014		

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012864
 Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Úä] ÁÖ MB-45980	Úä] V´] ^K MBLK	V^• d[á^K 6020WDAsM	Wj á K µg/L	Ú ^] ÁÖäK 7/3/2014	Ü´ } P[K 94018
Ó á } áÖK PBW	Óäë & @ÖK 45980	V^• d[KEPA 6020	EPA 3010A	Öj ä´ • ä ÁÖäK 7/3/2014	Ú^´ P[K 1800314
Öj ä´ c	Ú^•´ c	ÚÚŠ	ÚÚŠÁçä´ ^	ÚÚŠÁÜ^ ÁXä	Ä ÜÖÖ Š , Šä ä Pá Öä ä ÜÜÖÁÜ^ ÁXä
Ö•^) ä	PÖ	€€€			
T ä´ * ä´ ^•^	PÖ	€€€			
Úä] ÁÖ LCS-45980	Úä] V´] ^K LCS	V^• d[á^K 6020WDAsM	Wj á K µg/L	Ú ^] ÁÖäK 7/3/2014	Ü´ } P[K 94018
Ó á } áÖK LCSW	Óäë & @ÖK 45980	V^• d[KEPA 6020	EPA 3010A	Öj ä´ • ä ÁÖäK 7/3/2014	Ú^´ P[K 1800315
Öj ä´ c	Ú^•´ c	ÚÚŠ	ÚÚŠÁçä´ ^	ÚÚŠÁÜ^ ÁXä	Ä ÜÖÖ Š , Šä ä Pá Öä ä ÜÜÖÁÜ^ ÁXä
Ö•^) ä	J È GJ	€€€	F€€€	€	Ji ÈH í FFi
T ä´ * ä´ ^•^	F€FÈHí	€€€	F€€€	€	F€F í FFi
Úä] ÁÖ N012863-004B-MS	Úä] V´] ^K MS	V^• d[á^K 6020WDAsM	Wj á K µg/L	Ú ^] ÁÖäK 7/3/2014	Ü´ } P[K 94018
Ó á } áÖK ZZZZZZ	Óäë & @ÖK 45980	V^• d[KEPA 6020	EPA 3010A	Öj ä´ • ä ÁÖäK 7/3/2014	Ú^´ P[K 1800319
Öj ä´ c	Ú^•´ c	ÚÚŠ	ÚÚŠÁçä´ ^	ÚÚŠÁÜ^ ÁXä	Ä ÜÖÖ Š , Šä ä Pá Öä ä ÜÜÖÁÜ^ ÁXä
Ö•^) ä	ì J È G F	€€€	F€€€	ì È G	F€J í FG
T ä´ * ä´ ^•^	JHÈ GG	€€€	F€€€	€	JHÈ í FG
Úä] ÁÖ N012863-004B-MSD	Úä] V´] ^K MSD	V^• d[á^K 6020WDAsM	Wj á K µg/L	Ú ^] ÁÖäK 7/3/2014	Ü´ } P[K 94018
Ó á } áÖK ZZZZZZ	Óäë & @ÖK 45980	V^• d[KEPA 6020	EPA 3010A	Öj ä´ • ä ÁÖäK 7/3/2014	Ú^´ P[K 1800320
Öj ä´ c	Ú^•´ c	ÚÚŠ	ÚÚŠÁçä´ ^	ÚÚŠÁÜ^ ÁXä	Ä ÜÖÖ Š , Šä ä Pá Öä ä ÜÜÖÁÜ^ ÁXä
Ö•^) ä	JGÈ	€€€	F€€€	ì È G	FIH í FG J È G HÈ F G€ Ü
T ä´ * ä´ ^•^	Jí È í €	€€€	F€€€	€	Jí È í FG JHÈ G GÈ G€

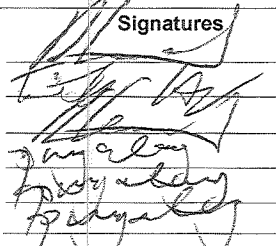
Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.AU Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C 2x1000 ml Poly HNO3	Filtered: Field Field Field Field NA NA NA Holding Time (days): 180 180 180 2 7 28 180	Metals Dissolved (6010BDIS) FF Fe Metals Dissolved (6020AFF) FF As, Mn Uranium (E200.8FF) FF Anions (E300.0) FF NO3N TDS (SM2540C) TOC (E5310) Gross Alpha/Beta (SM710B/E900)	Number of Containers COMMENTS						
SAMPLE ID	DATE	TIME	Matrix										
22-69-059-Q3	7/02/14	0803	GW			X	X	X		X	NO12864-1 Nelson ↓ -2 Preciado ↓ -3 Baca ↓ -4	5	
27-26-059-Q3	7/02/14	1035	GW			X	X	X		X		5	
36-25-059-Q3	7/02/14	0902	GW	X	X	X	X	X	X	X		8	
99-12-059-Q3	7/02/14	1045	GW			X	X	X		X		5	
										TOTAL NUMBER OF CONTAINERS	23		

Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures 	Date/Time 7/02/14 1657 7/02/14 1657 7/02/14 1658 7/02/14 1708 7/2/14 1708 7/2/14 1708	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2-900 Airbill No: 12#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Úlæ^Á^çã, Á@&@&|ã çÁ|, ÉÙÇ^ÁUÁã)ãã•Á[]É|{ }|ã &ÉÙÇ^Á[]É|{ }|ã &Á]á/Á^Á[çããã áÁ^•çÁ^Á}á!•ç[áÁ
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Sample Receipt Checklist

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Øà|áÁÛæ]|K ÙÖPÖÖ

03-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
PEFG Î ÎEEÖ ÅGG JÊ JËH	Ö: [~) á, æ:	Ï BBDFI Å KECCEÅT	HJUZU	F		
PEFG Î ÎEEÖ ÅG Ê Ê JËH	Ö: [~) á, æ:	Ï BBDFI Å KECCEÅT	HJUZU	F		
PEFG Î ÎEEÖ ÅH Ê Ê JËH	Ö: [~) á, æ:	Ï BBDFI Å KECCEÅT	HJUZU	F		
PEFG Î ÎEEÖ ÅJJÊGÊ JËH	Ö: [~) á, æ:	Ï BBDFI Å KECCEÅT	HJUZU	F		

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		FedEx#: 7705 0712 6187		
Relinquished by: <u>ACortes</u> 7/3/2014	Date/Time: 1500	Received by: _____	Date/Time: _____	
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____	

SAMPLE CALCULATION

METHOD: ÚT ÁÍ I €Ô

TEST NAME: V[æ^ÁÖÜ&|æ^ÁÜ^•ã^Á

MATRIX: Y æ^Á

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7/8/2014



Sample Calculation

METHOD: 00CEEE

TEST NAME: P^æ^ T^æ^ à^ ÁÓÚË Ù

MATRIX: CE^ ^ [^ •

ØUÛT WŠÖK

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Uranium, pCi/L = 8.1

Money 7/14/2014

ASSET Laboratories

ICP-Metals in Water

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Dilution Test Summary

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CLIENT: CH2M HILL
Work Order: N012864
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Úæ] ^ÖK N012858-001A-PS	Úæ] V] ^KPS	V^•d[á^K200.8DIS_U_ Wj æ K pCi/L	Ú^ /ÖæK	Û}P[K 94018
Ô a) öÖK ZZZZZ	Óæ&öÖK 45976	V^•d[KEPA 200.8	Öæf • ä /ÖæK 7/3/2014	Û^P[K 1800089
Öæf c	Û^~ c	ÚÚŠ ÚÚŠÁæ^ ÚÚŠÄ^Áæ	Ä ÜÖÖ Š, Šä æ Pã Öä æ ÜÜÖÄ^Áæ	Ä ÜÜÖ ÜÜÖŠä æ Ûæ
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


A = mg/L, IC calculated concentration
DF = dilution factor

For **N012864-003B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.555 * 10 \\ &= 15.55 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 16$$

 7/15/2014

Sample Calculation

METHOD: ÚT Í HF€Ô

TEST NAME: VUVOŠÁJÜÖÖP ÔÁÖËJÓUÞ

MATRIX: Y ÖVÖÜ

ØUÛT VŠÖK

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$$\text{TOC} = [\quad A \quad] [\quad \text{DF} \quad] - B$$

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Ø |K **N012864-003A**

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$$\text{TOC} = [\quad 0.91540 \quad] [\quad 1 \quad] - 0.00000$$

$$\text{TOC} = \quad 0.91540 \quad \frac{\text{ÁÁÁÁÁÁÁÁ}}{\text{ÁÁ}} \quad \text{Á}$$

ÁÁÁÁÁÁÁÁ | | |ã * |^• | • Á Á [Áã } ãæā ÖÁã |^• É

TOC = 0.92 mg/L

TOC = ND

PS 7/15/2014

Sample Calculation

METHOD: 00CEI EEE

TEST NAME: P^æ^ T^æ^ à^ ÁÜÚ

MATRIX: Y æ^!

ØÜÜT VŠÖEK

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Iron, mg/L = ND

Nancy 7/15/2014

CLIENT: CH2M HILL
Work Order: N012864
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Úæ] ^/ÖK N012864-003A-PS	Úæ] V] ^KPS	V^•d[á^K6010WD_HIN	Wj æ K mg/L	Ú^/ ÖæK	Û } P[K 94019
Ô a) öÖK ZZZZZ	Óæ&öÖK 45992	V^•d[KEPA 6010B	EPA 3010A	Öæ • ä ÖæK 7/7/2014	Û^ } P[K 1800470
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ASSET Laboratories

ICP-Metals in Water

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V^•cT^c@ á†	<u>ÓUCEI €€€</u>
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Dilution Test Summary

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Þ€FGÍHE€Í ÓEÖVÍY	T æ† *æ† ^•^	µ* Æ	€	ÞÁ	€		F€

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CLIENT: CH2M HILL
 Work Order: N012864
 Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Úæ] ^K N012863-004B-PS	Úæ] V] ^KPS	V^•d[á^K6020WDAsM	Wj æ K µg/L	Ú^ ^K	Ú } P[K 94018
Ô a) ^K ZZZZZ	Óæ&@ÖK 45980	V^•d[KEPA 6020	EPA 3010A	Ø æ • ã ^K 7/3/2014	Ú^ } P[K 1800318
Ø æ c	Ú^ } c	ÚÚŠ	ÚÚŠ^æ^	ÚÚŠ^æ^	Å ÚÖÖ Š, Šæ æ Pæ @æ æ ÚÚÖ^æ^
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE SUMMARY

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
30124452001	N012864 / 22-69-059-Q3	Y æ^:	É BEGF1 ÁÈ KEH	É BEJBF1 ÁEJK €
30124452002	N012864 / 27-26-059-Q3	Y æ^:	É BEGF1 ÁEKÍ	É BEJBF1 ÁEJK €
30124452003	N012864 / 36-25-059-Q3	Y æ^:	É BEGF1 ÁEJKEG	É BEJBF1 ÁEJK €
30124452004	N012864 / 99-12-059-Q3	Y æ^:	É BEGF1 ÁEKÍ	É BEJBF1 ÁEJK €

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

11111 11111
 11111 11111 11111 11111

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30124452001	N012864 / 22-69-059-Q3	11111 11111	11111	G
30124452002	N012864 / 27-26-059-Q3	11111 11111	11111	G
30124452003	N012864 / 36-25-059-Q3	11111 11111	11111	G
30124452004	N012864 / 99-12-059-Q3	11111 11111	11111	G

REPORT OF LABORATORY ANALYSIS

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 11111 11111 11111 11111 11111

QUALITY CONTROL DATA

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 U&^A: [b&A [EK HEFG I I G

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 O . [& a e a ^ S a A U a q] ^ . K HEFG I I G E F A HEFG I I G E C A HEFG I I G E E H HEFG I I G E E I

T O V P U O A O S C P S K I I I I I T a e a K Y a e !
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Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.allHabs.com
 TEL: 7023072659 FAX: 7023072691

QC Level: Level IV
 Field Sampler: SIGNED **30124452**
 03-Jul-14

Subcontractor: Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601
 TEL: 724.850.5600 FAX: 724.850.5601
 Acct #:

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012864-001D / 22-69-059-Q3	Groundwater	7/2/2014 8:03:00 AM	320ZP	1		001
N012864-002D / 27-26-059-Q3	Groundwater	7/2/2014 10:35:00 AM	320ZP	1		002
N012864-003E / 36-25-059-Q3	Groundwater	7/2/2014 9:02:00 AM	320ZP	1		003
N012864-004D / 99-12-059-Q3	Groundwater	7/2/2014 10:45:00 AM	320ZP	1		004

General Comments: Please email sample receipt acknowledgement to the PM.
 Please use PO#: N012864 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@allHabs.com by: Normal TAT.
 Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy (530)941-9227.

Date/Time		Date/Time	
Relinquished by: <i>Alorton</i>	7/3/2014	Received by: <i>[Signature]</i>	7-9-14 09:40
Relinquished by:	1500	Received by:	
FedEx#: 7705 0712 6187			



Sample Condition Upon Receipt

Client Name: ATL/ASSET

Project # 3012445

Courier: [x] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 770507126187

Custody Seal on Cooler/Box Present: [] yes [x] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [x] Bubble Bags None Other paper

Thermometer Used NA Type of Ice: Wet Blue None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: 7-9-14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of inspection items and checkboxes. Items include Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, etc.

Client Notification/ Resolution: Field Data Required? Y / N. Person Contacted: Date/Time: Comments/ Resolution:

Project Manager Review: [Signature] Date: 7/10/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: _____

Client Name: ATL/ASSET

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil Kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other	
001	WA																								
002	PM																								

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/16/2014
Worklist: 20497
Matrix: Soil

Method: EPA 900 0
SOP: PGH-R-001
MB Sample ID: 758655



Sample Matrix Spike Control Assessment		Gross Alpha	
Sample Collection Date:	7/2/2014	Analyte:	Gross Alpha
Sample MS I.D.:	1027804001	Sample I.D.:	7/2/2014
Sample MSD I.D.:	1027804001MS	Sample MS I.D.:	1027804001
Spike I.D.:	13-048GA	Sample MSD I.D.:	1027804001MS
MS/MSD Decay Corrected Spike Conc. (pCi/L):	64.598	Spike Volume Used in MS (mL):	0.10
Spike Volume Used in MSD (mL):	0.10	MS Aliquot (L, g, F):	0.2005
MS Target Conc. (pCi/L, g, F):	32.222	MSD Aliquot (L, g, F):	1.137
MS Spike uncertainty (calculated):	1.137	MSD Target Conc. (pCi/L, g, F):	2.568
MSD Spike uncertainty (calculated):	23.004	Sample Result:	4.965
Sample 1.96 Sigma Unc.:	5.977	Sample Matrix Spike Result:	50.893
Sample MS 1.96 Sigma Unc.:	11.309	Sample Matrix Spike Duplicate Result:	108.88%
MS % Recovery:	86.55%	MS Assessment:	Pass
MS Assessment:	Pass	MS/MSD Upper % Recovery Limits:	121.00%
MS/MSD Lower % Recovery Limits:	69.00%	MS/MSD Lower % Recovery Limits:	79.00%

Method Blank Assessment		LCS		LCSD		LCS		LCSD	
1.96 Sig Unc.	MDC	7/16/14 9.10	7/16/14 9.10	7/16/14 9.09	7/16/14 9.09	7/16/14 9.10	7/16/14 9.10	7/16/14 9.09	7/16/14 9.09
0.5830	1.5980	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB
0.7000	1.7220	64.598	84.655	84.655	84.655	84.655	84.655	84.655	84.655
0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
0.201	0.201	0.201	0.201	0.201	0.201	0.201	0.201	0.201	0.201
15.995	21.011	15.995	21.011	20.961	20.961	21.011	21.011	20.961	20.961
0.564	1.277	0.564	1.277	1.274	1.274	1.277	1.277	1.274	1.274
12.819	20.412	12.819	20.412	21.985	21.985	20.412	20.412	21.985	21.985
2.396	2.332	2.396	2.332	2.397	2.397	2.332	2.332	2.397	2.397
80.14%	97.15%	80.14%	97.15%	104.93%	104.93%	97.15%	97.15%	104.93%	104.93%
Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
121.00%	130.00%	121.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%
69.00%	79.00%	69.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC

Comments:

Handwritten signature: J. H. Heltman

July 18, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012883

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 07, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012883

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protom, Missouri.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 17-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012883
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012883-001A	CA-MW-101-059b-Q3	Water	7/7/2014 11:46:00 AM	7/7/2014	7/18/2014
N012883-001B	CA-MW-101-059b-Q3	Water	7/7/2014 11:46:00 AM	7/7/2014	7/18/2014
N012883-001C	CA-MW-101-059b-Q3	Water	7/7/2014 11:46:00 AM	7/7/2014	7/18/2014
N012883-001D	CA-MW-101-059b-Q3	Water	7/7/2014 11:46:00 AM	7/7/2014	7/18/2014
N012883-002A	CA-MW-101D-059b-Q3	Water	7/7/2014 10:39:00 AM	7/7/2014	7/18/2014
N012883-002B	CA-MW-101D-059b-Q3	Water	7/7/2014 10:39:00 AM	7/7/2014	7/18/2014
N012883-002C	CA-MW-101D-059b-Q3	Water	7/7/2014 10:39:00 AM	7/7/2014	7/18/2014
N012883-002D	CA-MW-101D-059b-Q3	Water	7/7/2014 10:39:00 AM	7/7/2014	7/18/2014
N012883-003A	CA-MW-102D-059b-Q3	Water	7/7/2014 12:41:00 PM	7/7/2014	7/18/2014
N012883-003B	CA-MW-102D-059b-Q3	Water	7/7/2014 12:41:00 PM	7/7/2014	7/18/2014
N012883-003C	CA-MW-102D-059b-Q3	Water	7/7/2014 12:41:00 PM	7/7/2014	7/18/2014
N012883-003D	CA-MW-102D-059b-Q3	Water	7/7/2014 12:41:00 PM	7/7/2014	7/18/2014
N012883-004A	CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	7/7/2014	7/18/2014
N012883-004B	CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	7/7/2014	7/18/2014
N012883-004C	CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	7/7/2014	7/18/2014
N012883-004D	CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	7/7/2014	7/18/2014
N012883-004E	CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	7/7/2014	7/18/2014
N012883-005A	MW-742-059b-Q3	Water	7/7/2014 4:01:00 PM	7/7/2014	7/18/2014
N012883-006A	SA-MW-15D-059b-Q3	Water	7/7/2014 3:41:00 PM	7/7/2014	7/18/2014
N012883-006B	SA-MW-15D-059b-Q3	Water	7/7/2014 3:41:00 PM	7/7/2014	7/18/2014
N012883-006C	SA-MW-15D-059b-Q3	Water	7/7/2014 3:41:00 PM	7/7/2014	7/18/2014
N012883-006D	SA-MW-15D-059b-Q3	Water	7/7/2014 3:41:00 PM	7/7/2014	7/18/2014
N012883-007A	MW-741-059b-Q3	Water	7/7/2014 4:10:00 PM	7/7/2014	7/18/2014
N012883-008A	SA-MW-12D-059b-Q3	Water	7/7/2014 12:24:00 PM	7/7/2014	7/18/2014
N012883-008B	SA-MW-12D-059b-Q3	Water	7/7/2014 12:24:00 PM	7/7/2014	7/18/2014
N012883-008C	SA-MW-12D-059b-Q3	Water	7/7/2014 12:24:00 PM	7/7/2014	7/18/2014
N012883-008D	SA-MW-12D-059b-Q3	Water	7/7/2014 12:24:00 PM	7/7/2014	7/18/2014
N012883-009A	SA-MW-12S-059b-Q3	Water	7/7/2014 11:36:00 AM	7/7/2014	7/18/2014
N012883-009B	SA-MW-12S-059b-Q3	Water	7/7/2014 11:36:00 AM	7/7/2014	7/18/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012883
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012883-009C	SA-MW-12S-059b-Q3	Water	7/7/2014 11:36:00 AM	7/7/2014	7/18/2014
N012883-009D	SA-MW-12S-059b-Q3	Water	7/7/2014 11:36:00 AM	7/7/2014	7/18/2014
N012883-010A	SA-MW-13D-059b-Q3	Water	7/7/2014 2:05:00 PM	7/7/2014	7/18/2014
N012883-010B	SA-MW-13D-059b-Q3	Water	7/7/2014 2:05:00 PM	7/7/2014	7/18/2014
N012883-010C	SA-MW-13D-059b-Q3	Water	7/7/2014 2:05:00 PM	7/7/2014	7/18/2014
N012883-010D	SA-MW-13D-059b-Q3	Water	7/7/2014 2:05:00 PM	7/7/2014	7/18/2014
N012883-011A	SA-MW-13S-059b-Q3	Water	7/7/2014 1:19:00 PM	7/7/2014	7/18/2014
N012883-011B	SA-MW-13S-059b-Q3	Water	7/7/2014 1:19:00 PM	7/7/2014	7/18/2014
N012883-011C	SA-MW-13S-059b-Q3	Water	7/7/2014 1:19:00 PM	7/7/2014	7/18/2014
N012883-011D	SA-MW-13S-059b-Q3	Water	7/7/2014 1:19:00 PM	7/7/2014	7/18/2014
N012883-012A	SA-MW-14D-059b-Q3	Water	7/7/2014 3:11:00 PM	7/7/2014	7/18/2014
N012883-012B	SA-MW-14D-059b-Q3	Water	7/7/2014 3:11:00 PM	7/7/2014	7/18/2014
N012883-012C	SA-MW-14D-059b-Q3	Water	7/7/2014 3:11:00 PM	7/7/2014	7/18/2014
N012883-012D	SA-MW-14D-059b-Q3	Water	7/7/2014 3:11:00 PM	7/7/2014	7/18/2014
N012883-013A	SA-MW-14S-059b-Q3	Water	7/7/2014 3:51:00 PM	7/7/2014	7/18/2014
N012883-013B	SA-MW-14S-059b-Q3	Water	7/7/2014 3:51:00 PM	7/7/2014	7/18/2014
N012883-013C	SA-MW-14S-059b-Q3	Water	7/7/2014 3:51:00 PM	7/7/2014	7/18/2014
N012883-013D	SA-MW-14S-059b-Q3	Water	7/7/2014 3:51:00 PM	7/7/2014	7/18/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-101-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-001

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium ND 0.016 0.20 µg/L 1 7/8/2014 11:31 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 10:39:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/8/2014 11:41 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-102D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 12:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-003

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium ND 0.016 0.20 µg/L 1 7/8/2014 11:51 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-102S-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 2:13:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-004

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium ND 0.016 0.20 µg/L 1 7/8/2014 12:00 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-005

Client Sample ID: MW-742-059b-Q3
Collection Date: 7/7/2014 4:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140709A	QC Batch: R94072				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/9/2014 02:19 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/8/2014 12:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
 Lab Order: N012883
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012883-006

Client Sample ID: SA-MW-15D-059b-Q3
 Collection Date: 7/7/2014 3:41:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064				PrepDate		Analyst: RB
Hexavalent Chromium	90	0.16	2.0		µg/L	10	7/8/2014 12:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-007

Client Sample ID: MW-741-059b-Q3
Collection Date: 7/7/2014 4:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140709A	QC Batch: R94072				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/9/2014 02:47 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/8/2014 12:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-12D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 12:24:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium 44 0.16 2.0 µg/L 10 7/8/2014 12:40 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:36:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064	PrepDate	Analyst: RB
Hexavalent Chromium	500 0.80	10	µg/L 50 7/8/2014 01:09 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-13D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 2:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium 26 0.080 1.0 µg/L 5 7/8/2014 01:19 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-13S-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-011

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium 800 1.6 20 µg/L 100 7/8/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708A	QC Batch: R94064	PrepDate	Analyst: RB
Hexavalent Chromium	44 0.080	1.0	µg/L
			5 7/8/2014 01:38 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-14S-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 3:51:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-013

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140708A** QC Batch: **R94064** PrepDate Analyst: **RB**
Hexavalent Chromium 100 0.16 2.0 µg/L 10 7/8/2014 01:47 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94072	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: PBW	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94072	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: LCSW	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.210 0.060 0.2000 0 105 90 110

Sample ID N012883-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801986						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.026 0.060 0.03056 0 20

Sample ID N012883-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.228 0.060 0.2000 0.03056 98.6 90 110

Sample ID N012883-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.207 0.060 0.2000 0 103 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012883-003AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0	104	90	110	0.2065	1.08	20	

Sample ID N012884-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	102	90	110				

Sample ID N012884-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801998						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.231	0.060	0.2000	0.02937	101	90	110				

Sample ID N012884-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802000						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02840	96.1	90	110				

Sample ID N012884-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802002						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02870	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012884-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.200	0.060	0.2000	0	99.9	90	110				

Sample ID N012885-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.357	0.060	0.2000	0.1478	104	90	110				

Sample ID N012883-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1803208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Sample ID N012883-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1803210						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01466	97.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012883-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801674						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.918	0.20	1.000	0	91.8	90	110	0.9310	1.41	20	

Sample ID N012883-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801677						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.976	0.20	1.000	0	97.6	90	110				

Sample ID N012883-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801678						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.962	0.20	1.000	0	96.2	90	110				

Sample ID N012883-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801679						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.934	0.20	1.000	0	93.4	90	110				

Sample ID N012883-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801689						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.909	0.20	1.000	0	90.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012884-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801690						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.952	0.20	1.000	0	95.2	90	110				

Sample ID N012884-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801691						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.954	0.20	1.000	0.02580	92.8	90	110				

Sample ID N012884-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801692						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.967	0.20	1.000	0.02260	94.4	90	110				

Sample ID N012884-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801693						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.349	0.20	5.000	5.525	96.5	90	110				

Sample ID N012884-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801694						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.963	0.20	5.000	6.059	98.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012884-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6	Analysis Date: 7/8/2014	SeqNo: 1801695							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.949	0.20	1.000	0.01840	93.1	90	110				

Sample ID N012884-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94064						
Client ID: ZZZZZZ	Batch ID: R94064	TestNo: EPA 218.6	Analysis Date: 7/8/2014	SeqNo: 1801696							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.738	0.20	1.000	3.748	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	92	1.6	25		mg/L	50	7/8/2014 04:53 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/8/2014 11:24 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 10:39:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	160	1.6	25		mg/L	50	7/8/2014 05:05 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/8/2014 11:37 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-003

Client Sample ID: CA-MW-102D-059b-Q3
Collection Date: 7/7/2014 12:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	180	1.6	25		mg/L	50	7/8/2014 05:18 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/8/2014 11:49 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:13:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	180	1.6	25		mg/L	50	7/8/2014 05:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/8/2014 12:02 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-006

Client Sample ID: SA-MW-15D-059b-Q3
Collection Date: 7/7/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140709A	QC Batch: R94058				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/9/2014 10:08 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	130	0.33	5.0		mg/L	10	7/8/2014 12:27 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	11	0.051	0.50		mg/L	10	7/8/2014 12:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:24:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	67	0.66	10		mg/L	20	7/8/2014 06:21 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	0.79	0.0051	0.050		mg/L	1	7/8/2014 01:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-009

Client Sample ID: SA-MW-12S-059b-Q3
Collection Date: 7/7/2014 11:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	110	0.66	10		mg/L	20	7/8/2014 06:34 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	4.9	0.026	0.25		mg/L	5	7/8/2014 01:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-010

Client Sample ID: SA-MW-13D-059b-Q3
Collection Date: 7/7/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	48	0.33	5.0		mg/L	10	7/8/2014 06:46 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	0.45	0.0051	0.050		mg/L	1	7/8/2014 01:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-011

Client Sample ID: SA-MW-13S-059b-Q3
Collection Date: 7/7/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045						Analyst: PS
Sulfate	130	0.66	10		mg/L	20	7/8/2014 06:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045						Analyst: PS
Nitrate as N	6.6	0.026	0.25		mg/L	5	7/8/2014 01:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Lab Order: N012883
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012883-012

Client Sample ID: SA-MW-14D-059b-Q3
 Collection Date: 7/7/2014 3:11:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	110	0.33	5.0		mg/L	10	7/8/2014 02:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	9.7	0.051	0.50		mg/L	10	7/8/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012883-013

Client Sample ID: SA-MW-14S-059b-Q3
Collection Date: 7/7/2014 3:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/8/2014 12:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Sulfate	110	0.33	5.0		mg/L	10	7/8/2014 11:12 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140708A	QC Batch: R94045				PrepDate		Analyst: PS
Nitrate as N	9.3	0.051	0.50		mg/L	10	7/8/2014 11:12 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID	MB-R94045_PO4	SampType:	MBLK	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94045			
Client ID:	PBW	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1801183			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID	LCS-R94045_PO4	SampType:	LCS	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94045			
Client ID:	LCSW	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1801184			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.498 0.10 2.500 0 99.9 90 110

Sample ID	N012883-013C-DUP	SampType:	DUP	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94045			
Client ID:	ZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1801190			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID	N012883-013C-MS	SampType:	MS	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94045			
Client ID:	ZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1801191			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.665 0.10 2.500 0 66.6 80 120 S

Sample ID	N012883-013C-MSD	SampType:	MSD	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94045			
Client ID:	ZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1801192			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.927 0.10 2.500 0 77.1 80 120 1.665 14.6 20 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94058_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: PBW	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801326						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94058_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: LCSW	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.474 0.10 2.500 0 99.0 90 110

Sample ID N012883-006C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N012883-006C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.965 0.10 2.500 0 119 80 120

Sample ID N012883-006C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 3.505 0.10 2.500 0 140 80 120 2.965 16.7 20 S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N012883-008C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0	Analysis Date: 7/8/2014	SeqNo: 1801021							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	161.840	10	100.0	67.32	94.5	80	120				

Sample ID N012883-008C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0	Analysis Date: 7/8/2014	SeqNo: 1801022							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	165.280	10	100.0	67.32	98.0	80	120	161.8	2.10	20	

Sample ID N012883-009C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0	Analysis Date: 7/8/2014	SeqNo: 1801025							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	207.980	10	100.0	112.3	95.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
 Work Order: N012883
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94045_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94045												
Client ID:	PBW	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1800964												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	

Nitrate as N ND 0.050

Sample ID	LCS-R94045_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94045												
Client ID:	LCSW	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1800965												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	

Nitrate as N 1.020 0.050 1.000 0 102 90 110

Sample ID	N012883-010C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94045												
Client ID:	ZZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1800982												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	

Nitrate as N 0.466 0.050 0.4520 3.05 20

Sample ID	N012883-010C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94045												
Client ID:	ZZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1800983												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	

Nitrate as N 1.449 0.050 1.000 0.4520 99.7 80 120

Sample ID	N012883-010C-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94045												
Client ID:	ZZZZZZ	Batch ID:	R94045	TestNo:	EPA 300.0			Analysis Date:	7/8/2014	SeqNo:	1800986												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	

Nitrate as N 1.463 0.050 1.000 0.4520 101 80 120 1.449 0.962 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012883-012C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	9.830	0.50						9.710	1.23	20	

Sample ID N012883-012C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	20.260	0.50	10.00	9.710	106	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 07:57 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-101D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 10:39:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-002

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140715A** QC Batch: **R94138** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/15/2014 08:20 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-102D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 12:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-003

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 07:41 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:13:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 08:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-15D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 3:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 08:50 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:24:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 08:04 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-12S-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 11:36:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 09:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-13D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 2:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 08:27 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
 Lab Order: N012883
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012883-011

Client Sample ID: SA-MW-13S-059b-Q3
 Collection Date: 7/7/2014 1:19:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	7/12/2014 09:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-14D-059b-Q3
Lab Order: N012883 **Collection Date:** 7/7/2014 3:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012883-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 10:22 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:51:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 09:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94106	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: PBW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803869
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94106	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: LCSW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803870
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.658	1.0	10.00	0	107	85	115				
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Sample ID N012927-001A-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803872
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.753	1.0	10.00	0.7782	110	75	125				
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Sample ID N012927-001A-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803873
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.880	1.0	10.00	0.7782	111	75	125	11.75	1.07	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94138	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138						
Client ID: PBW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94138	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138						
Client ID: LCSW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.681 1.0 10.00 0 107 85 115

Sample ID N012929-009D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138						
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.396 1.0 10.00 0.5304 98.7 75 125

Sample ID N012929-009D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138						
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804878						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.331 1.0 10.00 0.5304 98.0 75 125 10.40 0.633 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	0.89 0.0013	0.020	mg/L	1 7/9/2014 11:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 10:39:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	0.26 0.0013	0.020	mg/L	1 7/9/2014 11:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002			PrepDate	7/9/2014	Analyst: CEI
Iron	1.8	0.0013	0.020	mg/L	1	7/9/2014 11:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:13:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	1.2 0.0013	0.020	mg/L	1 7/9/2014 11:46 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-15D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:01 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:24:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:06 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:36:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:10 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-13D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-13S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:19 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:51:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140709A	QC Batch: 46002	PrepDate	7/9/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/9/2014 12:29 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46002	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94049
Client ID: PBW	Batch ID: 46002	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/9/2014	SeqNo: 1801054
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	ND	0.020			

Sample ID LCS-46002	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94049
Client ID: LCSW	Batch ID: 46002	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/9/2014	SeqNo: 1801055
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.109	0.020	0.1000	0	109 85 115

Sample ID N012883-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94049
Client ID: ZZZZZZ	Batch ID: 46002	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/9/2014	SeqNo: 1801059
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.371	0.020	0.1000	0.2600	111 75 125

Sample ID N012883-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94049
Client ID: ZZZZZZ	Batch ID: 46002	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/9/2014	SeqNo: 1801060
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.365	0.020	0.1000	0.2600	105 75 125 0.3707 1.60 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	16	0.027	0.10	µg/L	1	7/9/2014 02:55 PM
Manganese	1900	0.64	12	µg/L	25	7/9/2014 04:42 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-101D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 10:39:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	2.2	0.027	0.10	µg/L	1	7/9/2014 03:00 PM
Manganese	42	0.026	0.50	µg/L	1	7/9/2014 03:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	25	0.027	0.10	µg/L	1	7/9/2014 03:19 PM
Manganese	2400	0.64	12	µg/L	25	7/9/2014 05:10 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-102S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:13:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	8.8	0.027	0.10	µg/L	1	7/9/2014 03:25 PM
Manganese	3600	0.64	12	µg/L	25	7/9/2014 05:15 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-15D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:41:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI	
Arsenic	0.63	0.027	0.10		µg/L	1	7/9/2014 03:30 PM
Manganese	ND	0.026	0.50		µg/L	1	7/9/2014 03:30 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 12:24:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	1.4	0.027	0.10	µg/L	1	7/9/2014 03:36 PM
Manganese	ND	0.026	0.50	µg/L	1	7/9/2014 03:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-12S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 11:36:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	0.68	0.027	0.10	µg/L	1	7/9/2014 03:42 PM
Manganese	ND	0.026	0.50	µg/L	1	7/9/2014 03:42 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-13D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 2:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	2.0	0.027	0.10	µg/L	1	7/9/2014 03:47 PM
Manganese	ND	0.026	0.50	µg/L	1	7/9/2014 03:47 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-13S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI	
Arsenic	0.78	0.027	0.10		µg/L	1	7/9/2014 03:53 PM
Manganese	ND	0.026	0.50		µg/L	1	7/9/2014 03:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14D-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/9/2014 03:58 PM
Manganese	ND	0.026	0.50	µg/L	1	7/9/2014 03:58 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-14S-059b-Q3
Lab Order: N012883	Collection Date: 7/7/2014 3:51:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012883-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140709A	QC Batch: 46001			PrepDate	7/9/2014	Analyst: CEI	
Arsenic	0.86	0.027	0.10		µg/L	1	7/9/2014 04:04 PM
Manganese	ND	0.026	0.50		µg/L	1	7/9/2014 04:04 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46001	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: PBW	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801217						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID LCS-46001	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: LCSW	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801218						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	9.653	0.10	10.00	0	96.5	85	115				
Manganese	97.277	0.50	100.0	0	97.3	85	115				

Sample ID N012883-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801236						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	26.091	0.10	10.00	16.17	99.2	75	125				
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Sample ID N012883-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	26.690	0.10	10.00	16.17	105	75	125	26.09	2.27	20	
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Sample ID N012883-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801241						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	1972.600	12	100.0	1859	114	75	125				
-----------	----------	----	-------	------	-----	----	-----	--	--	--	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	N012883-001B-MSD	SampType:	MSD	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/9/2014	RunNo:	94050											
Client ID:	ZZZZZZ	Batch ID:	46001	TestNo:	EPA 6020		EPA 3010A	Analysis Date:	7/9/2014	SeqNo:	1801242											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Manganese		1962.482		12		100.0		1859		104		75		125		1973		0.514		20		

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix	Preservatives: (NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	4°C (blue ice)				
				Filtered:	Field	Field	Field	Field	Field	NA	Field			
				Holding Time (days):	28	180	180	2	2	28	7			
					Cr(VI) (E218, 6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Mn	Anions (E300, 0) FF NO3N, SO4	Ortho-Phosphate (E300, 0) FF	TOC (E5310)	Eosine, Fluorescein FF			
CA-MW-101-059b-Q3	7/7/2014	11:46	Water	X	X	X	X	X	X			No12883 -1	6	JD
CA-MW-101D-059b-Q3	7/7/2014	10:39	Water	X	X	X	X	X	X			-2	6	JD
CA-MW-102D-059b-Q3	7/7/2014	12:41	Water	X	X	X	X	X	X			-3	6	JD
CA-MW-102S-059b-Q3	7/7/2014	14:13	Water	X	X	X	X	X	X	X		-4	7	JD
MW-742-059b-Q3	7/7/2014	16:01	Water	X								-5	1	JD
SA-MW-15D-059b-Q3	7/7/2014	15:41	Water	X	X	X	X	X	X	X		-6	6	JD
MW-090-059b-Q3	7/7/2014		Water	X	X	X	X	X	X	X			6	
SA-MW-15S-059b-Q3	7/7/2014		Water	X	X	X	X	X	X	X			6	
MW-741-059b-Q3	7/7/2014	16:10	Water	X								No12883 -7	1	TH
SA-MW-12D-059b-Q3	7/7/2014	12:24	Water	X	X	X	X	X	X			-8	6	TH
SA-MW-12S-059b-Q3	7/7/2014	11:36	Water	X	X	X	X	X	X			-9	6	TH
SA-MW-13D-059b-Q3	7/7/2014	14:05	Water	X	X	X	X	X	X			-10	6	TH
SA-MW-13S-059b-Q3	7/7/2014	13:19	Water	X	X	X	X	X	X			-11	6	TH
SA-MW-14D-059b-Q3	7/7/2014	15:11	Water	X	X	X	X	X	X			-12	6	TH
SA-MW-14S-059b-Q3	7/7/2014	15:51	Water	X	X	X	X	X	X			-13	6	TH
TOTAL NUMBER OF CONTAINERS											69			

Approved by <i>K. Blum</i>	Signatures	Date/Time 7/7/14 1715	Shipping Details	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Sampled by <i>[Signature]</i>	Date/Time 7/7/14 1718	Method of Shipment:			
Relinquished by <i>[Signature]</i>	Date/Time 7/7/14 1718	On Ice: <input checked="" type="checkbox"/> yes / no 32C / 2-900 / RTR			
Received by <i>[Signature]</i>	Date/Time 7/7/14 1718	Airbill No:			
Relinquished by <i>[Signature]</i>	Date/Time 7/7/14 200	Lab Name: Advanced Technology Laboratories			
Received by <i>[Signature]</i>	Date/Time 7/7/14 200	Lab Phone: (702) 307-2659			

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/7/2014 Workorder: N012883
 Rep sample Temp (Deg C): 3.2/2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

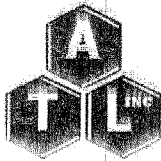
Comments

Checklist Completed B

AC  7/8/14

Reviewed By:

 07/09/14



ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
 1572 Alley Lane
 Protem, Missouri 65733

TEL: (417) 785-4289
 FAX: (417) 785-4290
 Acct #:

Field Sampler: SIGNED

08-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCEIN
N012883-004E / CA-MW-102S-059b-Q3	Water	7/7/2014 2:13:00 PM	2OZP	1	1

General Comments:

Please email sample receipt acknowledgement to the PM.

Please use PO#:N012883 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. For Questions, please contact Shawn Duffy at (530)941-9227.

	Date/Time	FedEx#: 7705 3854 2453	Date/Time
Relinquished by: <i>Amanda Costa</i>	<i>7/8/14 1500</i>	Received by: _____	_____
Relinquished by: _____	_____	Received by: _____	_____

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012883-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.014658 * 1 \\ &= 0.014658\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \text{mg/L} = \text{ND}$$

 7/17/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012883-013A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 10.4239 * 10 \\ &= 104.239\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 100$$



7/11/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012883-006C** concentration in mg/L is calculated as follows:

$$\begin{aligned}\text{Nitrate, mg/L} &= 1.142 * 10 \\ &= 11.42\end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 11$$



7/17/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012883-003D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.82120] [1] - 0.04960$$

$$\text{TOC} = 0.77160$$

Reporting results in two significant figures,

$$\text{TOC} = 0.77 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 7/17/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Water

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012883-001B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.8898944333 * 1 * (25/25) \\ &= 0.8898944333 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.89$$

Duney 7/16/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012883
Test Method: EPA 6010
Analysis Date: 7/9/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46002

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Fe. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012883-002B-DT 5X	Iron	mg/L	0.276717038	NA	0.259981264	6.44%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012883-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94049						
Client ID: ZZZZZ	Batch ID: 46002	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801058							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4.972	0.040	5.000	0.2600	94.2	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Arsenic

Calculate the ~~Chromium~~ concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012883-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic ug/L} &= 16.166435824 * 1 * (25/25) \\ &= 16.166435824 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic ug/L} = 16$$



7/11/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012883
Test Method: EPA 6020
Analysis Date: 7/9/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46001

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012883-001B-DT 5X	Arsenic	µg/L	16.41124885	PASS	16.16643582	1.51%	10
N012883-001B-DT 125X	Manganese	µg/L	1898.851443	PASS	1858.645064	2.16%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012883
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012883-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801235						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	36.587	0.20	20.00	16.17	102	80	120				
---------	--------	------	-------	-------	-----	----	-----	--	--	--	--

Sample ID: N012883-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46001	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801240						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	4272.840	12	2500	1859	96.6	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 14, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012885

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 07, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012885

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 11-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012885
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012885-001A	06-14-059-Q3	Groundwater	7/7/2014 11:57:00 AM	7/7/2014	7/14/2014
N012885-001B	06-14-059-Q3	Groundwater	7/7/2014 11:57:00 AM	7/7/2014	7/14/2014
N012885-002A	06-15-059-Q3	Groundwater	7/7/2014 11:10:00 AM	7/7/2014	7/14/2014
N012885-002B	06-15-059-Q3	Groundwater	7/7/2014 11:10:00 AM	7/7/2014	7/14/2014
N012885-003A	06-16-059-Q3	Groundwater	7/7/2014 12:20:00 PM	7/7/2014	7/14/2014
N012885-003B	06-16-059-Q3	Groundwater	7/7/2014 12:20:00 PM	7/7/2014	7/14/2014
N012885-004A	25-16-059-Q3	Groundwater	7/7/2014 1:18:00 PM	7/7/2014	7/14/2014
N012885-004B	25-16-059-Q3	Groundwater	7/7/2014 1:18:00 PM	7/7/2014	7/14/2014
N012885-005A	31E-07-059-Q3	Groundwater	7/7/2014 12:43:00 PM	7/7/2014	7/14/2014
N012885-005B	31E-07-059-Q3	Groundwater	7/7/2014 12:43:00 PM	7/7/2014	7/14/2014
N012885-006A	99-16-059-Q3	Groundwater	7/7/2014 12:53:00 PM	7/7/2014	7/14/2014
N012885-006B	99-16-059-Q3	Groundwater	7/7/2014 12:53:00 PM	7/7/2014	7/14/2014
N012885-007A	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/14/2014
N012885-007B	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/14/2014
N012885-008A	23-30-059-Q3	Groundwater	7/7/2014 2:11:00 PM	7/7/2014	7/14/2014
N012885-008B	23-30-059-Q3	Groundwater	7/7/2014 2:11:00 PM	7/7/2014	7/14/2014
N012885-009A	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/14/2014
N012885-009B	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/14/2014
N012885-010A	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/14/2014
N012885-010B	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/14/2014
N012885-011A	33-21-059-Q3	Groundwater	7/7/2014 4:29:00 PM	7/7/2014	7/14/2014
N012885-011B	33-21-059-Q3	Groundwater	7/7/2014 4:29:00 PM	7/7/2014	7/14/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-001

Client Sample ID: 06-14-059-Q3
Collection Date: 7/7/2014 11:57:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	0.20	0.016	0.20		µg/L	1	7/8/2014 09:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/9/2014 12:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-002

Client Sample ID: 06-15-059-Q3
Collection Date: 7/7/2014 11:10:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	0.33	0.016	0.20		µg/L	1	7/8/2014 09:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/9/2014 12:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-003

Client Sample ID: 06-16-059-Q3
Collection Date: 7/7/2014 12:20:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	0.29	0.016	0.20		µg/L	1	7/8/2014 09:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/9/2014 12:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-004

Client Sample ID: 25-16-059-Q3
Collection Date: 7/7/2014 1:18:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/8/2014 10:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/9/2014 12:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-005

Client Sample ID: 31E-07-059-Q3
Collection Date: 7/7/2014 12:43:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/8/2014 10:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/9/2014 12:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-006

Client Sample ID: 99-16-059-Q3
Collection Date: 7/7/2014 12:53:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/8/2014 11:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/9/2014 01:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-007

Client Sample ID: 23-24-059-Q3
Collection Date: 7/7/2014 1:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	0.34	0.016	0.20		µg/L	1	7/8/2014 11:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/9/2014 01:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-008

Client Sample ID: 23-30-059-Q3
Collection Date: 7/7/2014 2:11:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/8/2014 11:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/9/2014 01:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-009

Client Sample ID: 22-108-059-Q3
Collection Date: 7/7/2014 2:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140709A	QC Batch: R94072				PrepDate		Analyst: RB
Hexavalent Chromium	0.15	0.012	0.060		µg/L	1	7/9/2014 05:36 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 12:01 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/9/2014 01:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-010

Client Sample ID: 22-103-059-Q3
Collection Date: 7/7/2014 3:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/9/2014 11:02 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/9/2014 01:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 11-Jul-14

CLIENT: CH2M HILL
Lab Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012885-011

Client Sample ID: 33-21-059-Q3
Collection Date: 7/7/2014 4:29:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140708B	QC Batch: R94065				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/9/2014 12:58 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140709A	QC Batch: 46000				PrepDate	7/9/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/9/2014 01:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94072	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: PBW	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94072	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: LCSW	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.210 0.060 0.2000 0 105 90 110

Sample ID N012883-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801986						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.026 0.060 0.03056 0 20

Sample ID N012883-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.228 0.060 0.2000 0.03056 98.6 90 110

Sample ID N012883-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.207 0.060 0.2000 0 103 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012883-003AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0	104	90	110	0.2065	1.08	20	

Sample ID N012884-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	102	90	110				

Sample ID N012884-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801998						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.231	0.060	0.2000	0.02937	101	90	110				

Sample ID N012884-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802000						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02840	96.1	90	110				

Sample ID N012884-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802002						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02870	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012884-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6	Analysis Date: 7/9/2014	SeqNo: 1802004							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.200	0.060	0.2000	0	99.9	90	110				

Sample ID N012885-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94072						
Client ID: ZZZZZZ	Batch ID: R94072	TestNo: EPA 218.6	Analysis Date: 7/9/2014	SeqNo: 1802005							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.357	0.060	0.2000	0.1478	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID LCS-R94065	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: LCSW	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801707						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.036	0.20	5.000	0	101	90	110				

Sample ID MB-R94065	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: PBW	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801708						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID N012884-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801710						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.960	0.20	1.000	0	96.0	90	110				

Sample ID N012884-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801712						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.785	0.20	1.000	3.773	101	90	110				

Sample ID N012884-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801714						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.077	0.20	1.000	3.136	94.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012884-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801716						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.946	0.20	1.000	1.958	98.8	90	110				

Sample ID N012884-008A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Sample ID N012884-008A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110	0.9603	2.87	20	

Sample ID N012885-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801722						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.181	0.20	1.000	0.2049	97.6	90	110				

Sample ID N012885-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801724						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.310	0.20	1.000	0.3263	98.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012885-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801726						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.275	0.20	1.000	0.2886	98.6	90	110				

Sample ID N012885-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801728						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.316	0.20	1.000	2.250	107	90	110				

Sample ID N012885-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801732						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.293	0.20	1.000	1.315	97.8	90	110				

Sample ID N012885-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801734						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.290	0.20	1.000	1.321	96.9	90	110				

Sample ID N012885-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801736						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.336	0.20	1.000	0.3369	99.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012885-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/8/2014	SeqNo: 1801738						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.810	0.20	1.000	2.785	102	90	110				

Sample ID N012885-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801740						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.097	0.20	1.000	0.1519	94.5	90	110				

Sample ID N012885-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94065						
Client ID: ZZZZZZ	Batch ID: R94065	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1801744						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.041	0.20	1.000	1.082	95.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012885-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.942	0.20	1.000	2.042	90.0	90	110				

Sample ID N012896-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.567	0.20	1.000	1.559	101	90	110				

Sample ID N012896-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802091						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.949	0.20	1.000	2.964	98.4	90	110				

Sample ID N012896-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.103	0.20	1.000	2.168	93.6	90	110				

Sample ID N012896-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802093						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.198	0.20	1.000	0.2501	94.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.071	0.20	1.000	1.121	95.0	90	110				

Sample ID N012896-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.158	0.20	1.000	0.1919	96.6	90	110				

Sample ID N012896-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.505	0.20	1.000	1.561	94.4	90	110				

Sample ID N012896-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802097						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.013	0.20	1.000	3.057	95.6	90	110				

Sample ID N012896-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.940	0.20	1.000	0	94.0	90	110				

Sample ID N012896-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802104						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.048	0.20	1.000	2.086	96.2	90	110				

Sample ID N012896-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802106						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.266	0.20	1.000	2.343	92.3	90	110				

Sample ID N012896-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802108						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.250	0.20	1.000	1.294	95.6	90	110				

Sample ID N012896-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.700	0.20	1.000	0.7032	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802114						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.278	0.20	1.000	3.375	90.2	90	110				

Sample ID N012896-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802116						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.742	0.20	1.000	0.7543	98.8	90	110				

Sample ID N012896-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802117						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.967	0.20	1.000	0	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46000	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: PBW	Batch ID: 46000	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801085						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46000	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: LCSW	Batch ID: 46000	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801086						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.578 1.0 10.00 0 95.8 85 115

Sample ID N012885-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: ZZZZZZ	Batch ID: 46000	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.641 1.0 10.00 0.2155 94.3 75 125

Sample ID N012885-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/9/2014	RunNo: 94050						
Client ID: ZZZZZZ	Batch ID: 46000	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801091						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.487 1.0 10.00 0.2155 92.7 75 125 9.641 1.62 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix					
06-14-059-Q3	7/7/14	11:57	GW	X	X	NO12885-1 ↓ -2 -3 -4 -5 -6 -7 -8 -9 -10 -11	2	Ruisch
06-15-059-Q3	7/7/14	11:10	GW	X	X		2	Ruisch
06-16-059-Q3	7/7/14	12:20	GW	X	X		2	Ruisch
25-16-059-Q3	7/7/14	13:18	GW	X	X		2	Awad
31E-07-059-Q3	7/7/14	12:43	GW	X	X		2	Byun
99-16-059-Q3	7/7/14	12:53	GW	X	X		2	
23-24-059-Q3	7/7/14	13:51	GW	X	X		2	Jackson
23-30-059-Q3	7/7/14	14:11	GW	X	X		2	PG&E
22-108-059-Q3	7/7/14	14:49	GW	X	X		2	Maloski
22-103-059-Q3	7/7/14	15:15	GW	X	X		2	Woods
33-21-059-Q3	7/7/14	16:29	GW	X	X		2	Pearce
TOTAL NUMBER OF CONTAINERS							22	

Approved by: <u>H. Blinn</u> Sampled by: <u>Spencer D. Smith</u> Relinquished by: <u>SD Smith</u> Received by: <u>[Signature]</u> Relinquished by: <u>[Signature]</u> Received by: <u>[Signature]</u>	Signatures Date/Time 7/7/14 1705 7/7/14 1705 7/7/14 1705 7/7/14 1705 7/7/14 2005 7/7/14 2005	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <u>3-5</u> Airbill No: <u>1A2</u> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/7/2014 Workorder: N012885
 Rep sample Temp (Deg C): 3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/8/14

Reviewed By:

gog 07/09/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012885-009A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.147835 * 1 \\ &= 0.147835\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.15$$

 7/11/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012885-011A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.082 * 1 \\ &= 1.082\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.1$$



7/11/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012885-004B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.5356783757 * 1 * (25/25) \\ &= 2.5356783757 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.5$$



7/11/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012885
Test Method: EPA 6020
Analysis Date: 7/9/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46000

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012885-001B-DT 5X	Chromium	µg/L	0	NA	0.215538681	100.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012885
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012885-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94050						
Client ID: ZZZZZ	Batch ID: 46000	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/9/2014	SeqNo: 1801089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.572	2.0	20.00	0.2155	96.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 18, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012886

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 07, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012886

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012886
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012886-001A	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/18/2014
N012886-001B	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/18/2014
N012886-001C	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/18/2014
N012886-001D	23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	7/7/2014	7/18/2014
N012886-002A	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/18/2014
N012886-002B	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/18/2014
N012886-002C	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/18/2014
N012886-002D	22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	7/7/2014	7/18/2014
N012886-003A	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/18/2014
N012886-003B	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/18/2014
N012886-003C	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/18/2014
N012886-003D	22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	7/7/2014	7/18/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-001

Client Sample ID: 23-24-059-Q3
Collection Date: 7/7/2014 1:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	370	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-002

Client Sample ID: 22-108-059-Q3
Collection Date: 7/7/2014 2:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2300	18	18	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-003

Client Sample ID: 22-103-059-Q3
Collection Date: 7/7/2014 3:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	550	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012886
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46012	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068
Client ID: PBW	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801752
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera ND 10

Sample ID LCS-46012	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068
Client ID: LCSW	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801753
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 983.000 10 1000 0 98.3 80 120

Sample ID N012886-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068
Client ID: ZZZZZ	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801755
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 372.000 10 368.0 1.08 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-001

Client Sample ID: 23-24-059-Q3
Collection Date: 7/7/2014 1:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140710A	QC Batch: 46011				PrepDate: 7/10/2014		Analyst: CEI
Uranium	2.9	0.011	0.67		pCi/L	1	7/10/2014 02:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-002

Client Sample ID: 22-108-059-Q3
Collection Date: 7/7/2014 2:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140710A	QC Batch: 46011			PrepDate	7/10/2014	Analyst: CEI
Uranium	29	0.011	0.67	pCi/L	1	7/10/2014 02:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-003

Client Sample ID: 22-103-059-Q3
Collection Date: 7/7/2014 3:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140710A	QC Batch: 46011				PrepDate	7/10/2014	Analyst: CEI
Uranium	9.4	0.011	0.67		pCi/L	1	7/10/2014 03:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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CLIENT: CH2M HILL
Work Order: N012886
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46011	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: PBW	Batch ID: 46011	TestNo: EPA 200.8		Analysis Date: 7/10/2014	SeqNo: 1803177
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46011	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: LCSW	Batch ID: 46011	TestNo: EPA 200.8		Analysis Date: 7/10/2014	SeqNo: 1803178
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.404	0.67	6.700	0	111 85 115

Sample ID N012899-001E-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZZ	Batch ID: 46011	TestNo: EPA 200.8		Analysis Date: 7/10/2014	SeqNo: 1803182
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	9.637	0.67	6.700	1.754	118 75 125

Sample ID N012899-001E-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZZ	Batch ID: 46011	TestNo: EPA 200.8		Analysis Date: 7/10/2014	SeqNo: 1803183
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	9.677	0.67	6.700	1.754	118 75 125 9.637 0.409 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-001

Client Sample ID: 23-24-059-Q3
Collection Date: 7/7/2014 1:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140708A** QC Batch: **R94045** PrepDate Analyst: **PS**
Nitrate as N 1.8 0.0051 0.050 mg/L 1 7/8/2014 10:59 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-002

Client Sample ID: 22-108-059-Q3
Collection Date: 7/7/2014 2:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140708A** QC Batch: **R94045** PrepDate Analyst: **PS**
Nitrate as N 9.7 0.026 0.25 mg/L 5 7/8/2014 02:21 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012886
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012886-003

Client Sample ID: 22-103-059-Q3
Collection Date: 7/7/2014 3:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140708A** QC Batch: **R94045** PrepDate Analyst: **PS**
Nitrate as N 1.9 0.0051 0.050 mg/L 1 7/8/2014 02:34 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N012886
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94045_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: PBW	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID LCS-R94045_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: LCSW	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.020	0.050	1.000	0	102	90	110				

Sample ID N012883-010C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.466	0.050						0.4520	3.05	20	

Sample ID N012883-010C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.449	0.050	1.000	0.4520	99.7	80	120				

Sample ID N012883-010C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800986						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.463	0.050	1.000	0.4520	101	80	120	1.449	0.962	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012886
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012883-012C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	9.830	0.50						9.710	1.23	20	

Sample ID N012883-012C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94045						
Client ID: ZZZZZZ	Batch ID: R94045	TestNo: EPA 300.0		Analysis Date: 7/8/2014	SeqNo: 1800988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	20.260	0.50	10.00	9.710	106	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



ASSET LABORATORIES
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Project Name	Location	Project Number	Project Manager	Sample Manager	Cell Number	Fax Number	Task Order	Project	Turnaround Time	Shipping Date:	COC Number:	Containers								Number of Containers	COMMENTS							
												500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	2x1000 ml Poly	Preservatives:			Filtered:	Holding Time (days):	Matrix				
PGE Hinkley	Hinkley	492584.UR.AU	Jennifer Low	Jim Hanvey	(404) 229-2181	(510) 622-9136	59	2014-DOM-059-Q3	10 Days				HNO3, 4°C	Field	180	Metals Dissolved (6010BDIS) FF Fe												
													HNO3, 4°C	Field	180	Metals Dissolved (6020AFF) FF As, Mn												
													HNO3, 4°C	Field	180	Uranium (E200.8FF) FF												
													4°C	Field	2	Anions (E300.0) FF NO3N												
													4°C	NA	7	TDS (SM2540C)												
													H2SO4, 4°C	NA	28	TOC (E5310)												
													HNO3	NA	180	Gross Alpha/Beta (SM7110B/E900)												
23-24-059-Q3					7/7/14	13:51	GW																		5	Jackson		
22-108-059-Q3					7/7/14	14:49	GW																		5	Maloski		
22-103-059-Q3					7/7/14	15:15	GW																		5	Woods		
												TOTAL NUMBER OF CONTAINERS								15								

Approved by	<i>H. Blum</i>	Signatures	Date/Time	7/7/14 1705	Shipping Details	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Sampled by	<i>Spencer Doolittle</i>	Date/Time	7/7/14 1705	Method of Shipment:			
Relinquished by	<i>SD</i>	Date/Time	7/7/14 1705	On Ice: (yes) / no <i>3032</i>			
Received by	<i>Pungalan</i>	Date/Time	7/7/14 1709	Airbill No: <i>1042</i>			
Relinquished by	<i>Pungalan</i>	Date/Time	7/7/14 2008	Lab Name: Advanced Technology Laboratories			
Received by	<i>Play</i>	Date/Time	7/7/14 2008	Lab Phone: (702) 307-2659			

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/7/2014 Workorder: N012886
 Rep sample Temp (Deg C): 3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/8/14

Reviewed By:

 07/10/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Spencer Doolittle

09-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012886-001D / 23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	32OZP	1		
N012886-002D / 22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	32OZP	1		
N012886-003D / 22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012886 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

		Date/Time	FedEx#: 7705 5280 9392	Date/Time
Relinquished by: <u>ACortes</u>	<u>7/9/14</u>	1500	Received by: _____	_____
Relinquished by: _____	_____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012886-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0315-63.9947)*1000000}{100}$$

368 mg/L

Reporting result in two significant figures,

TDS =370mg/L


7/10/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/9/2014								TDS/CONDUCTIVITY
Date Finished: 7/10/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46012	100	63.3746	63.3746	0	1	0.00		
LCS-46012	100	63.5102	63.6085	983	1	983.00		
N012886-001C	100	63.9947	64.0315	368	1	368.00	590	0.62
N012886-001C-DUP	100	63.9774	64.0146	372	1	372.00	590	0.63
N012886-002C	55	64.1103	64.2367	1264	1.8181818	2298.18	2870	0.80
N012886-003C	100	64.2738	64.3289	551	1	551.00	871	0.63
N012896-012C	100	62.9943	63.0375	432	1	432.00	666	0.65
N012896-013C	100	63.8032	63.8683	651	1	651.00	993	0.66
N012896-014C	100	63.7801	63.8289	488	1	488.00	713	0.68
N012896-015D	100	61.3625	61.3971	346	1	346.00	559	0.62
N012896-016C	100	62.4475	62.5162	687	1	687.00	1043	0.66
N012896-030C	100	60.6368	60.743	1062	1	1062.00	1528	0.70
N012896-031C	100	60.9855	61.065	795	1	795.00	1179	0.67
N012896-032C	100	61.7341	61.7888	547	1	547.00	873	0.63

mer
7/10/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012886-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 4.36304018234123 * 1 * (25/25) * 0.67 \\ &= 2.92323692216862 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 2.9$$



7/17/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012886
Test Method: EPA 6020
Analysis Date: 7/10/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46011

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012899-001E-DT 5X	Uranium	pCi/L	1.714908806	NA	1.754244115	2.24%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012886
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012899-001E-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46011	TestNo: EPA 200.8	Analysis Date: 7/10/2014	SeqNo: 1803181							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	17.567	1.3	13.40	1.754	118	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012886-002B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.941 * 5 \\ &= 9.705 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 9.7$$



7/17/2014

August 05, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012886-001D/23-24-059-Q3
Pace Project No.: 30125007

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012886-001D/23-24-059-Q3
Pace Project No.: 30125007

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125007001	N012886-001D/23-24-059-Q3	Water	07/07/14 13:51	07/15/14 09:30
30125007002	N012886-002D/22-108-059-Q3	Water	07/07/14 14:49	07/15/14 09:30
30125007003	N012886-003D/22-103-059-Q3	Water	07/07/14 15:15	07/15/14 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012886-001D/23-24-059-Q3
Pace Project No.: 30125007

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125007001	N012886-001D/23-24-059-Q3	EPA 900.0	FCC	2
30125007002	N012886-002D/22-108-059-Q3	EPA 900.0	FCC	2
30125007003	N012886-003D/22-103-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012886-001D/23-24-059-Q3

Pace Project No.: 30125007

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 05, 2014

General Information:

3 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012886-001D/23-24-059-Q3

Pace Project No.: 30125007

QC Batch: RADC/20541

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30125007001, 30125007002, 30125007003

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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30125007

CHAIN-OF-CUSTODY RECORD

ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

QC Level: Level IV

Subcontractor: Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

Field Sampler: Spencer Doolittle

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #: _____

09-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012886-001D / 23-24-059-Q3	Groundwater	7/7/2014 1:51:00 PM	320ZP	1		001
N012886-002D / 22-108-059-Q3	Groundwater	7/7/2014 2:49:00 PM	320ZP	1		002
N012886-003D / 22-103-059-Q3	Groundwater	7/7/2014 3:15:00 PM	320ZP	1		003

General Comments: Please email sample receipt acknowledgement to the PM.
 Please use PO#: N012886 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.
 Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Alton</i>	Date/Time: 7/9/14
Relinquished by: _____	Date/Time: _____
Received by: <i>Alysa R. Muchoney</i>	Date/Time: 7/15/14
Received by: _____	Date/Time: _____

FedEx#: 7705 5280 9392



Sample Condition Upon Receipt

Client Name: ATL

Project # 3012 5007

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770552809392

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other foam

Thermometer Used _____ N/A Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Date and Initials of person examining contents: ARM 7/15/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>PHK2</u>
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>ARM</u> Lot # of added preservative _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 7/16/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: 36125007
 Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 galL)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other	
100	565																								
200	565																								

Quality Control Sample Performance Assessment



FCC
Date: 7/21/2014
Method: EPA 900 0
Worklist: 20541
Matrix: Water
MB Sample ID: 759967
SOP: PCH-R-001

Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	0.1370	0.5540	1.4190	0.42200		
Gross Beta	0.2100	0.6720	1.5910	0.53200		

Sample Matrix Spike Control Assessment		Gross Alpha	
Analyte:	Gross Alpha	7/14/2014	7/14/2014
Sample Collection Date:	7/14/2014	30124917001	30124917001
Sample I.D.:	30124917001	30124917001MS	30124917001MS
Sample MSD I.D.:	13-048GA	64.598	13-047GB
Spike I.D.:	64.598	0.10	0.10
MS/MSD Decay Corrected Spike Conc. (pCi/L):	64.598	0.2009	0.2009
Spike Volume Used in MS (mL):	0.10	32.156	42.146
Spike Volume Used in MSD (mL):	0.10	1.134	2.561
MS Aliquot (L, g, F):	0.2009	2.313	2.909
MS Target Conc. (pCi/L, g, F):	32.156	1.528	1.199
MSD Aliquot (L, g, F):	1.134	24.919	44.065
MSD Target Conc. (pCi/L, g, F):	2.561	6.192	8.544
MS Spike uncertainty (calculated):	1.134	70.30%	97.65%
MSD Spike uncertainty (calculated):	2.313	Pass	Pass
Sample Result:	2.313	MS Assessment:	MS Assessment:
Sample 1.96 Sigma Unc.:	1.528	MSD Assessment:	MSD Assessment:
Sample Matrix Spike Result:	24.919	MS/MSD Upper % Recovery Limits:	121.00%
Sample MS 1.96 Sigma Unc.:	6.192	MS/MSD Lower % Recovery Limits:	130.00%
Sample Matrix Spike Duplicate Result:	6.192	Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample MSD 1.96 Sigma Unc.:	8.544		
MS % Recovery:	70.30%		
MSD % Recovery:	97.65%		
MS Assessment:	Pass		
MSD Assessment:	Pass		
MS/MSD Upper % Recovery Limits:	121.00%		
MS/MSD Lower % Recovery Limits:	130.00%		
Matrix Spike/Matrix Spike Duplicate Sample Assessment			

Laboratory Control Sample Assessment		Gross Alpha		Gross Beta	
Count Date:	7/19/14 13:26	7/19/14 13:27	7/19/14 13:26	7/19/14 13:27	7/19/14 13:27
Spike I.D.:	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB
Spike Concentration (pCi/L):	64.598	84.637	84.637	84.637	84.637
Volume Used (mL):	0.050	0.050	0.050	0.050	0.050
Aliquot Volume (L, g, F):	0.201	0.202	0.202	0.201	0.201
Target Conc. (pCi/L, g, F):	16.017	16.064	20.986	21.048	21.048
1.96 Sigma Uncertainty (Calculated):	0.565	0.567	1.275	1.279	1.279
Result (pCi/L, g, F):	15.560	12.061	21.117	22.198	22.198
1.96 Sigma Unc:	3.775	3.108	4.455	4.616	4.616
% Recovery:	97.14%	75.08%	100.62%	105.47%	105.47%
Assessment:	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits:	121.00%	121.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits:	69.00%	69.00%	79.00%	79.00%	79.00%
Duplicate Sample Assessment					
LCS/LCSD Y or N?:	Y	Y	Y	Y	Y
Analyte:	Gross Alpha	Gross Alpha	Gross Alpha	Gross Alpha	Gross Alpha
Sample I.D.:	LCS20541	LCS20541	LCS20541	LCS20541	LCS20541
Duplicate Sample I.D.:	LCS20541	LCS20541	LCS20541	LCS20541	LCS20541
Sample Result (pCi/L, g, F):	15.5600	21.1170	21.1170	21.1170	21.1170
1.96 Sigma Unc:	3.7750	4.4560	4.4560	4.4560	4.4560
Sample Duplicate Result (pCi/L, g, F):	12.0610	22.1980	22.1980	22.1980	22.1980
Duplicate Sample 1.96 Sigma Unc.:	3.1090	4.6160	4.6160	4.6160	4.6160
Either results below MDC?	NO	NO	NO	NO	NO
Relative Percent Difference:	25.34%	4.99%	4.99%	4.99%	4.99%
Assessment:	Pass	Pass	Pass	Pass	Pass
% RPD Limit:	34.00%	29.00%	29.00%	29.00%	29.00%

Duplicate Sample Assessment		Gross Alpha	
Analyte:	Gross Alpha	7/19/14 13:26	7/19/14 13:27
Sample I.D.:	LCS20541	13-047GB	13-047GB
Duplicate Sample I.D.:	LCS20541	84.637	84.637
Sample Result (pCi/L, g, F):	15.5600	0.050	0.050
1.96 Sigma Unc:	3.7750	0.201	0.201
Sample Duplicate Result (pCi/L, g, F):	12.0610	16.064	20.986
Duplicate Sample 1.96 Sigma Unc.:	3.1090	1.275	1.279
Relative Percent Difference:	25.34%	4.99%	4.99%
Assessment:	Pass	Pass	Pass
% RPD Limit:	34.00%	29.00%	29.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature

July 22, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012896

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 08, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012896

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 22-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012896
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012896-001A	MW-826-059-Q3	Water	7/8/2014 3:02:00 PM	7/8/2014	7/22/2014
N012896-002A	MW-147D-059-Q3	Water	7/8/2014 2:13:00 PM	7/8/2014	7/22/2014
N012896-002B	MW-147D-059-Q3	Water	7/8/2014 2:13:00 PM	7/8/2014	7/22/2014
N012896-003A	MW-147S-059-Q3	Water	7/8/2014 2:51:00 PM	7/8/2014	7/22/2014
N012896-003B	MW-147S-059-Q3	Water	7/8/2014 2:51:00 PM	7/8/2014	7/22/2014
N012896-004A	MW-148S-059-Q3	Water	7/8/2014 1:29:00 PM	7/8/2014	7/22/2014
N012896-004B	MW-148S-059-Q3	Water	7/8/2014 1:29:00 PM	7/8/2014	7/22/2014
N012896-005A	MW-168D-059-Q3	Water	7/8/2014 12:04:00 PM	7/8/2014	7/22/2014
N012896-005B	MW-168D-059-Q3	Water	7/8/2014 12:04:00 PM	7/8/2014	7/22/2014
N012896-006A	MW-168S-059-Q3	Water	7/8/2014 11:35:00 AM	7/8/2014	7/22/2014
N012896-006B	MW-168S-059-Q3	Water	7/8/2014 11:35:00 AM	7/8/2014	7/22/2014
N012896-007A	MW-169D-059-Q3	Water	7/8/2014 10:20:00 AM	7/8/2014	7/22/2014
N012896-007B	MW-169D-059-Q3	Water	7/8/2014 10:20:00 AM	7/8/2014	7/22/2014
N012896-008A	MW-169S1-059-Q3	Water	7/8/2014 9:34:00 AM	7/8/2014	7/22/2014
N012896-008B	MW-169S1-059-Q3	Water	7/8/2014 9:34:00 AM	7/8/2014	7/22/2014
N012896-009A	MW-169S2-059-Q3	Water	7/8/2014 8:37:00 AM	7/8/2014	7/22/2014
N012896-009B	MW-169S2-059-Q3	Water	7/8/2014 8:37:00 AM	7/8/2014	7/22/2014
N012896-010A	MW-825-059-Q3	Water	7/8/2014 3:40:00 PM	7/8/2014	7/22/2014
N012896-011A	EX-17-059-Q3	Water	7/8/2014 11:22:00 AM	7/8/2014	7/22/2014
N012896-011B	EX-17-059-Q3	Water	7/8/2014 11:22:00 AM	7/8/2014	7/22/2014
N012896-012A	MW-44B-059-Q3	Water	7/8/2014 3:20:00 PM	7/8/2014	7/22/2014
N012896-012B	MW-44B-059-Q3	Water	7/8/2014 3:20:00 PM	7/8/2014	7/22/2014
N012896-012C	MW-44B-059-Q3	Water	7/8/2014 3:20:00 PM	7/8/2014	7/22/2014
N012896-013A	MW-45A-059-Q3	Water	7/8/2014 8:46:00 AM	7/8/2014	7/22/2014
N012896-013B	MW-45A-059-Q3	Water	7/8/2014 8:46:00 AM	7/8/2014	7/22/2014
N012896-013C	MW-45A-059-Q3	Water	7/8/2014 8:46:00 AM	7/8/2014	7/22/2014
N012896-014A	MW-45B-059-Q3	Water	7/8/2014 9:34:00 AM	7/8/2014	7/22/2014
N012896-014B	MW-45B-059-Q3	Water	7/8/2014 9:34:00 AM	7/8/2014	7/22/2014
N012896-014C	MW-45B-059-Q3	Water	7/8/2014 9:34:00 AM	7/8/2014	7/22/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012896
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012896-015A	MW-54-059-Q3	Water	7/8/2014 2:22:00 PM	7/8/2014	7/22/2014
N012896-015B	MW-54-059-Q3	Water	7/8/2014 2:22:00 PM	7/8/2014	7/22/2014
N012896-015C	MW-54-059-Q3	Water	7/8/2014 2:22:00 PM	7/8/2014	7/22/2014
N012896-015D	MW-54-059-Q3	Water	7/8/2014 2:22:00 PM	7/8/2014	7/22/2014
N012896-016A	MW-66A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-016B	MW-66A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-016C	MW-66A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-017A	MW-76D-059-Q3	Water	7/8/2014 12:31:00 PM	7/8/2014	7/22/2014
N012896-017B	MW-76D-059-Q3	Water	7/8/2014 12:31:00 PM	7/8/2014	7/22/2014
N012896-018A	MW-76S-059-Q3	Water	7/8/2014 1:33:00 PM	7/8/2014	7/22/2014
N012896-018B	MW-76S-059-Q3	Water	7/8/2014 1:33:00 PM	7/8/2014	7/22/2014
N012896-019A	MW-824-059-Q3	Water	7/8/2014 3:41:00 PM	7/8/2014	7/22/2014
N012896-020A	MW-121D-059-Q3	Water	7/8/2014 3:15:00 PM	7/8/2014	7/22/2014
N012896-020B	MW-121D-059-Q3	Water	7/8/2014 3:15:00 PM	7/8/2014	7/22/2014
N012896-021A	MW-121S-059-Q3	Water	7/8/2014 2:11:00 PM	7/8/2014	7/22/2014
N012896-021B	MW-121S-059-Q3	Water	7/8/2014 2:11:00 PM	7/8/2014	7/22/2014
N012896-022A	MW-122D-059-Q3	Water	7/8/2014 2:23:00 PM	7/8/2014	7/22/2014
N012896-022B	MW-122D-059-Q3	Water	7/8/2014 2:23:00 PM	7/8/2014	7/22/2014
N012896-023A	MW-153S-059-Q3	Water	7/8/2014 10:57:00 AM	7/8/2014	7/22/2014
N012896-023B	MW-153S-059-Q3	Water	7/8/2014 10:57:00 AM	7/8/2014	7/22/2014
N012896-024A	MW-165D-059-Q3	Water	7/8/2014 11:59:00 AM	7/8/2014	7/22/2014
N012896-024B	MW-165D-059-Q3	Water	7/8/2014 11:59:00 AM	7/8/2014	7/22/2014
N012896-025A	MW-165S-059-Q3	Water	7/8/2014 12:49:00 PM	7/8/2014	7/22/2014
N012896-025B	MW-165S-059-Q3	Water	7/8/2014 12:49:00 PM	7/8/2014	7/22/2014
N012896-026A	MW-202D-059-Q3	Water	7/8/2014 9:45:00 AM	7/8/2014	7/22/2014
N012896-026B	MW-202D-059-Q3	Water	7/8/2014 9:45:00 AM	7/8/2014	7/22/2014
N012896-027A	MW-202S-059-Q3	Water	7/8/2014 8:57:00 AM	7/8/2014	7/22/2014
N012896-027B	MW-202S-059-Q3	Water	7/8/2014 8:57:00 AM	7/8/2014	7/22/2014
N012896-028A	MW-827-059-Q3	Water	7/8/2014 2:20:00 PM	7/8/2014	7/22/2014
N012896-029A	MW-15-059-Q3	Water	7/8/2014 8:40:00 AM	7/8/2014	7/22/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012896
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012896-029B	MW-15-059-Q3	Water	7/8/2014 8:40:00 AM	7/8/2014	7/22/2014
N012896-030A	MW-33A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-030B	MW-33A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-030C	MW-33A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-030D	MW-33A-059-Q3	Water	7/8/2014 10:27:00 AM	7/8/2014	7/22/2014
N012896-031A	MW-33B-059-Q3	Water	7/8/2014 9:39:00 AM	7/8/2014	7/22/2014
N012896-031B	MW-33B-059-Q3	Water	7/8/2014 9:39:00 AM	7/8/2014	7/22/2014
N012896-031C	MW-33B-059-Q3	Water	7/8/2014 9:39:00 AM	7/8/2014	7/22/2014
N012896-031D	MW-33B-059-Q3	Water	7/8/2014 9:39:00 AM	7/8/2014	7/22/2014
N012896-032A	MW-35-059-Q3	Water	7/8/2014 11:11:00 AM	7/8/2014	7/22/2014
N012896-032B	MW-35-059-Q3	Water	7/8/2014 11:11:00 AM	7/8/2014	7/22/2014
N012896-032C	MW-35-059-Q3	Water	7/8/2014 11:11:00 AM	7/8/2014	7/22/2014
N012896-032D	MW-35-059-Q3	Water	7/8/2014 11:11:00 AM	7/8/2014	7/22/2014
N012896-033A	MW-48-059-Q3	Water	7/8/2014 2:46:00 PM	7/8/2014	7/22/2014
N012896-033B	MW-48-059-Q3	Water	7/8/2014 2:46:00 PM	7/8/2014	7/22/2014
N012896-034A	MW-51-059-Q3	Water	7/8/2014 12:48:00 PM	7/8/2014	7/22/2014
N012896-034B	MW-51-059-Q3	Water	7/8/2014 12:48:00 PM	7/8/2014	7/22/2014
N012896-035A	MW-52-059-Q3	Water	7/8/2014 12:05:00 PM	7/8/2014	7/22/2014
N012896-035B	MW-52-059-Q3	Water	7/8/2014 12:05:00 PM	7/8/2014	7/22/2014
N012896-036A	MW-53-059-Q3	Water	7/8/2014 1:53:00 PM	7/8/2014	7/22/2014
N012896-036B	MW-53-059-Q3	Water	7/8/2014 1:53:00 PM	7/8/2014	7/22/2014
N012896-037A	MW-823-059-Q3	Water	7/8/2014 12:40:00 PM	7/8/2014	7/22/2014
N012896-038A	MW-997-059-Q3	Water	7/8/2014 9:21:00 AM	7/8/2014	7/22/2014
N012896-038B	MW-997-059-Q3	Water	7/8/2014 9:21:00 AM	7/8/2014	7/22/2014
N012896-039A	SC-MW-21D-059-Q3	Water	7/8/2014 9:11:00 AM	7/8/2014	7/22/2014
N012896-039B	SC-MW-21D-059-Q3	Water	7/8/2014 9:11:00 AM	7/8/2014	7/22/2014
N012896-040A	SC-MW-22D-059-Q3	Water	7/8/2014 10:35:00 AM	7/8/2014	7/22/2014
N012896-040B	SC-MW-22D-059-Q3	Water	7/8/2014 10:35:00 AM	7/8/2014	7/22/2014
N012896-041A	SC-MW-23D-059-Q3	Water	7/8/2014 12:23:00 PM	7/8/2014	7/22/2014
N012896-041B	SC-MW-23D-059-Q3	Water	7/8/2014 12:23:00 PM	7/8/2014	7/22/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-012

Client Sample ID: MW-44B-059-Q3
Collection Date: 7/8/2014 3:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	430	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-013

Client Sample ID: MW-45A-059-Q3
Collection Date: 7/8/2014 8:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	650	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-014

Client Sample ID: MW-45B-059-Q3
Collection Date: 7/8/2014 9:34:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	490	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	350	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-66A-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 10:27:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	690	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-33A-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 10:27:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-030	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-031

Client Sample ID: MW-33B-059-Q3
Collection Date: 7/8/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	800	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-35-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140709D	QC Batch: 46012			PrepDate	7/9/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	550	10	10	mg/L	1	7/9/2014 09:01 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46012	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068						
Client ID: PBW	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801752						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46012	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068						
Client ID: LCSW	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801753						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		983.000	10	1000	0	98.3	80	120			

Sample ID N012886-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/9/2014	RunNo: 94068						
Client ID: ZZZZZ	Batch ID: 46012	TestNo: SM2540C		Analysis Date: 7/9/2014	SeqNo: 1801755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		372.000	10					368.0	1.08	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-001

Client Sample ID: MW-826-059-Q3
Collection Date: 7/8/2014 3:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 01:20 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 07:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-002

Client Sample ID: MW-147D-059-Q3
Collection Date: 7/8/2014 2:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/9/2014 11:33 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/10/2014 03:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-003

Client Sample ID: MW-147S-059-Q3
Collection Date: 7/8/2014 2:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	3.0	0.016	0.20		µg/L	1	7/9/2014 11:42 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/10/2014 03:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-004

Client Sample ID: MW-148S-059-Q3
Collection Date: 7/8/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/9/2014 11:52 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/10/2014 04:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-005

Client Sample ID: MW-168D-059-Q3
Collection Date: 7/8/2014 12:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	0.25	0.016	0.20		µg/L	1	7/9/2014 12:01 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 04:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-006

Client Sample ID: MW-168S-059-Q3
Collection Date: 7/8/2014 11:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/9/2014 12:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/10/2014 04:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-007

Client Sample ID: MW-169D-059-Q3
Collection Date: 7/8/2014 10:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	0.19	0.012	0.060		µg/L	1	7/11/2014 01:41 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 12:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 04:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-008

Client Sample ID: MW-169S1-059-Q3
Collection Date: 7/8/2014 9:34:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/9/2014 12:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/10/2014 04:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-169S2-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 8:37:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/9/2014 12:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	7/10/2014 04:29 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-010

Client Sample ID: MW-825-059-Q3
Collection Date: 7/8/2014 3:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 02:03 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 01:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-011

Client Sample ID: EX-17-059-Q3
Collection Date: 7/8/2014 11:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 02:25 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 04:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 04:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-012

Client Sample ID: MW-44B-059-Q3
Collection Date: 7/8/2014 3:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/9/2014 04:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/10/2014 04:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-013

Client Sample ID: MW-45A-059-Q3
Collection Date: 7/8/2014 8:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/9/2014 04:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/10/2014 04:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-014

Client Sample ID: MW-45B-059-Q3
Collection Date: 7/8/2014 9:34:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/9/2014 05:16 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/10/2014 04:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	0.70	0.016	0.20		µg/L	1	7/9/2014 05:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 05:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-016

Client Sample ID: MW-66A-059-Q3
Collection Date: 7/8/2014 10:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/9/2014 06:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	7/10/2014 05:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-017

Client Sample ID: MW-76D-059-Q3
Collection Date: 7/8/2014 12:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140709A	QC Batch: R94076				PrepDate		Analyst: RB
Hexavalent Chromium	0.75	0.016	0.20		µg/L	1	7/9/2014 06:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 05:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-018

Client Sample ID: MW-76S-059-Q3
Collection Date: 7/8/2014 1:33:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	3.7	0.016	0.20		µg/L	1	7/10/2014 01:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	7/10/2014 05:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-019

Client Sample ID: MW-824-059-Q3
Collection Date: 7/8/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 03:07 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 02:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-020

Client Sample ID: MW-121D-059-Q3
Collection Date: 7/8/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	3.5	0.016	0.20		µg/L	1	7/10/2014 02:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	3.7	0.030	1.0		µg/L	1	7/10/2014 05:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-021

Client Sample ID: MW-121S-059-Q3
Collection Date: 7/8/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/10/2014 03:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/10/2014 05:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-022

Client Sample ID: MW-122D-059-Q3
Collection Date: 7/8/2014 2:23:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 03:32 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 03:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 05:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-023

Client Sample ID: MW-153S-059-Q3
Collection Date: 7/8/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	4.2	0.016	0.20		µg/L	1	7/10/2014 03:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015				PrepDate	7/10/2014	Analyst: CEI
Chromium	4.5	0.030	1.0		µg/L	1	7/10/2014 05:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-024

Client Sample ID: MW-165D-059-Q3
Collection Date: 7/8/2014 11:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/10/2014 04:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/10/2014 06:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-025

Client Sample ID: MW-165S-059-Q3
Collection Date: 7/8/2014 12:49:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/10/2014 04:27 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/10/2014 06:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-026

Client Sample ID: MW-202D-059-Q3
Collection Date: 7/8/2014 9:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/10/2014 09:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/10/2014 06:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-027

Client Sample ID: MW-202S-059-Q3
Collection Date: 7/8/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/10/2014 09:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/10/2014 06:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-028

Client Sample ID: MW-827-059-Q3
Collection Date: 7/8/2014 2:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 03:53 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 05:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-029

Client Sample ID: MW-15-059-Q3
Collection Date: 7/8/2014 8:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1700	3.2	40		µg/L	200	7/10/2014 07:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1800	0.76	25		µg/L	25	7/11/2014 12:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-030

Client Sample ID: MW-33A-059-Q3
Collection Date: 7/8/2014 10:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/10/2014 05:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/14/2014 01:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-031

Client Sample ID: MW-33B-059-Q3
Collection Date: 7/8/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/10/2014 05:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/10/2014 07:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-35-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	0.69	0.016	0.20		µg/L	1	7/10/2014 05:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 07:27 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-033

Client Sample ID: MW-48-059-Q3
Collection Date: 7/8/2014 2:46:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/10/2014 05:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/10/2014 07:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-034

Client Sample ID: MW-51-059-Q3
Collection Date: 7/8/2014 12:48:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	0.62	0.016	0.20		µg/L	1	7/10/2014 06:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 07:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-035

Client Sample ID: MW-52-059-Q3
Collection Date: 7/8/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/10/2014 06:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/10/2014 07:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-036

Client Sample ID: MW-53-059-Q3
Collection Date: 7/8/2014 1:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	1.0	0.016	0.20		µg/L	1	7/10/2014 06:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 07:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-037

Client Sample ID: MW-823-059-Q3
Collection Date: 7/8/2014 12:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 04:14 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710A	QC Batch: R94091				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 06:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-997-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 9:21:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-038	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 04:35 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 10:06 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 07:54 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-21D-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 9:11:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-039	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 05:37 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 11:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 08:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-22D-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 10:35:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-040	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	45	0.16	2.0		µg/L	10	7/10/2014 10:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	43	0.030	1.0		µg/L	1	7/10/2014 08:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-23D-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 12:23:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-041	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 05:16 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/10/2014 11:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 08:11 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94089	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: PBW	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802460
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94089	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: LCSW	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802461
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.190	0.060	0.2000	0	95.1 90 110

Sample ID N012898-002ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802463
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.057	0.060			0.05908 0 20

Sample ID N012898-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802464
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.246	0.060	0.2000	0.05908	93.5 90 110

Sample ID N012898-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.328	0.060	0.2000	0.1335	97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012898-012AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.326	0.060	0.2000	0.1335	96.0	90	110	0.3276	0.615	20	

Sample ID N012898-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.251	0.060	0.2000	0.06253	94.3	90	110				

Sample ID N012898-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0.01293	91.4	90	110				

Sample ID N012896-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012896-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.392	0.060	0.2000	0.1949	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012896-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802479						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110				

Sample ID N012896-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0	109	90	110				

Sample ID N012896-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0	109	90	110				

Sample ID N012896-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.231	0.060	0.2000	0.02975	101	90	110				

Sample ID N012896-028AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802489						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012896-037AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802491						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Sample ID N012896-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01358	102	90	110				

Sample ID N012896-041AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802497						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0	107	90	110				

Sample ID N012896-039AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01323	94.7	90	110				

Qualifiers:

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|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012896
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012885-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.942	0.20	1.000	2.042	90.0	90	110				

Sample ID N012896-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.567	0.20	1.000	1.559	101	90	110				

Sample ID N012896-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802091						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.949	0.20	1.000	2.964	98.4	90	110				

Sample ID N012896-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.103	0.20	1.000	2.168	93.6	90	110				

Sample ID N012896-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802093						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.198	0.20	1.000	0.2501	94.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.071	0.20	1.000	1.121	95.0	90	110				

Sample ID N012896-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.158	0.20	1.000	0.1919	96.6	90	110				

Sample ID N012896-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.505	0.20	1.000	1.561	94.4	90	110				

Sample ID N012896-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802097						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.013	0.20	1.000	3.057	95.6	90	110				

Sample ID N012896-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.5	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.940	0.20	1.000	0	94.0	90	110
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Sample ID N012896-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802104						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.048	0.20	1.000	2.086	96.2	90	110
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Sample ID N012896-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802106						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.266	0.20	1.000	2.343	92.3	90	110
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Sample ID N012896-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802108						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.250	0.20	1.000	1.294	95.6	90	110
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Sample ID N012896-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.700	0.20	1.000	0.7032	99.7	90	110
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Qualifiers:

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|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6	Analysis Date: 7/9/2014	SeqNo: 1802114							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.278	0.20	1.000	3.375	90.2	90	110				

Sample ID N012896-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6	Analysis Date: 7/9/2014	SeqNo: 1802116							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.742	0.20	1.000	0.7543	98.8	90	110				

Sample ID N012896-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94076						
Client ID: ZZZZZZ	Batch ID: R94076	TestNo: EPA 218.6	Analysis Date: 7/9/2014	SeqNo: 1802117							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.967	0.20	1.000	0	96.7	90	110				

Qualifiers:

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|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94091	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: PBW	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94091	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: LCSW	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802558						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.953	0.20	5.000	0	99.1	90	110				
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Sample ID N012896-018A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802560						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.766	0.20						3.749	0.447	20	
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Sample ID N012896-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.728	0.20	1.000	3.749	97.9	90	110				
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Sample ID N012896-018A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.747	0.20	1.000	3.749	99.8	90	110	4.728	0.399	20	
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Qualifiers:

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|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802564							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				

Sample ID N012896-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802566							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.508	0.20	1.000	3.540	96.8	90	110				

Sample ID N012896-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802570							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.808	0.20	1.000	1.838	97.0	90	110				

Sample ID N012896-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802572							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.022	0.20	1.000	0.03340	98.9	90	110				

Sample ID N012896-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802575							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.096	0.20	1.000	1.088	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802577						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.494	0.20	1.000	1.499	99.5	90	110				

Sample ID N012896-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802592						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110				

Sample ID N012896-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.770	0.20	1.000	1.763	101	90	110				

Sample ID N012896-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802594						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.562	0.20	1.000	1.628	93.3	90	110				

Sample ID N012896-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802595						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.672	0.20	1.000	0.6852	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802596						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.222	0.20	1.000	1.214	101	90	110				

Sample ID N012896-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802597						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.626	0.20	1.000	0.6224	100	90	110				

Sample ID N012896-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.354	0.20	1.000	1.355	99.9	90	110				

Sample ID N012896-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.978	0.20	1.000	0.9961	98.2	90	110				

Sample ID N012896-037A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802600						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.011	0.20	1.000	0	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802604							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.342	0.20	1.000	1.322	102	90	110				

Sample ID N012896-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802606							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.676	0.20	1.000	1.655	102	90	110				

Sample ID N012896-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94091						
Client ID: ZZZZZZ	Batch ID: R94091	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802607							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.972	0.20	5.000	4.161	96.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94092	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: PBW	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94092	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: LCSW	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.973	0.20	5.000	0	99.5	90	110				
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Sample ID N012896-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				
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Sample ID N012896-038A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802650						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012896-038A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802651						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.025	0.20	1.000	0	103	90	110	1.001	2.38	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802653						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.015	0.20	1.000	0	102	90	110				

Sample ID N012896-041A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802655						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID N012898-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802657						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.035	0.20	1.000	1.057	97.8	90	110				

Sample ID N012898-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.981	0.20	5.000	4.009	99.5	90	110				

Sample ID N012898-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802663						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.393	0.20	1.000	1.380	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46015	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: PBW	Batch ID: 46015	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802055						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	0.271	1.0									
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Sample ID LCS-46015	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: LCSW	Batch ID: 46015	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802056						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	9.731	1.0	10.00	0	97.3	85	115				
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Sample ID N012896-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZZ	Batch ID: 46015	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802060						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	11.052	1.0	10.00	2.068	89.8	75	125				
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Sample ID N012896-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZZ	Batch ID: 46015	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802061						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	11.394	1.0	10.00	2.068	93.3	75	125	11.05	3.04	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46016	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: PBW	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46016	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: LCSW	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.994 1.0 10.00 0 99.9 85 115

Sample ID N012896-024B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZZ	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.471 1.0 10.00 1.364 91.1 75 125

Sample ID N012896-024B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZZ	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.704 1.0 10.00 1.364 93.4 75 125 10.47 2.20 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ALKALINITY, SPECIATED

SM 2320 B

RunID: WETCHEM_140709B	QC Batch: R94048				PrepDate	Analyst: LCC	
Alkalinity, Bicarbonate (As CaCO3)	130	1.2	5.0		mg/L	1	7/9/2014
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	7/9/2014
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	7/9/2014
Alkalinity, Total (As CaCO3)	130	1.2	5.0		mg/L	1	7/9/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID	LCS-R94048	SampType:	LCS	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94048
Client ID:	LCSW	Batch ID:	R94048	TestNo:	SM 2320 B			Analysis Date:	7/9/2014	SeqNo:	1810987
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	100.457	5.0	100.0	0	100	85	115				
Alkalinity, Total (As CaCO3)	102.740	5.0	100.0	0	103	85	115				

Sample ID	LCSD-R94048	SampType:	LCSD	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94048
Client ID:	LCSS02	Batch ID:	R94048	TestNo:	SM 2320 B			Analysis Date:	7/9/2014	SeqNo:	1810988
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	100.457	5.0	100.0	0	100	85	115	100.5	0	20	
Alkalinity, Total (As CaCO3)	102.740	5.0	100.0	0	103	85	115	102.7	0	20	

Sample ID	MB-R94048	SampType:	MBLK	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94048
Client ID:	PBW	Batch ID:	R94048	TestNo:	SM 2320 B			Analysis Date:	7/9/2014	SeqNo:	1810989
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0									
Alkalinity, Carbonate (As CaCO3)	ND	5.0									
Alkalinity, Hydroxide (As CaCO3)	ND	5.0									
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID	N012896-015D-DUP	SampType:	DUP	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94048
Client ID:	ZZZZZ	Batch ID:	R94048	TestNo:	SM 2320 B			Analysis Date:	7/9/2014	SeqNo:	1810991
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	133.562	5.0						133.6	0	30	
Alkalinity, Carbonate (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Total (As CaCO3)	133.562	5.0						133.6	0	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Chloride	50	1.2	25		mg/L	50	7/10/2014 01:54 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140709A	QC Batch: R94058				PrepDate		Analyst: PS
Sulfate	78	1.6	25		mg/L	50	7/9/2014 12:14 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140709A	QC Batch: R94058				PrepDate		Analyst: PS
Nitrate as N	0.63	0.0051	0.050		mg/L	1	7/9/2014 10:33 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94082_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	PBW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802340			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		ND		0.50										

Sample ID	LCS-R94082_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	LCSW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802341			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		2.509		0.50	2.500	0		100	90	110				

Sample ID	N012908-010C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802352			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		44.090		5.0							43.46	1.44	20	

Sample ID	N012908-010C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802353			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		69.930		5.0	25.00	43.46		106	80	120				

Sample ID	N012908-010C-MSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802354			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		69.940		5.0	25.00	43.46		106	80	120	69.93	0.0143	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94058_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: PBW	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	ND	0.50									
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Sample ID LCS-R94058_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: LCSW	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801382						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	4.862	0.50	5.000	0	97.2	90	110				
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Sample ID N012896-015C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801383						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	77.100	25						78.30	1.54	20	
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Sample ID N012896-015C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801387						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	307.900	25	250.0	78.30	91.8	80	120				
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Sample ID N012896-015C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94058						
Client ID: ZZZZZZ	Batch ID: R94058	TestNo: EPA 300.0		Analysis Date: 7/9/2014	SeqNo: 1801388						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	312.150	25	250.0	78.30	93.5	80	120	307.9	1.37	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** MW-33A-059-Q3
Lab Order: N012896 **Collection Date:** 7/8/2014 10:27:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW **Matrix:** WATER
Lab ID: N012896-030

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 10:45 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-031

Client Sample ID: MW-33B-059-Q3
Collection Date: 7/8/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 11:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-35-059-Q3
Lab Order: N012896	Collection Date: 7/8/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012896-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 04:59 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94106	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: PBW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803869
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94106	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: LCSW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803870
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.658	1.0	10.00	0	107	85	115				
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Sample ID N012927-001A-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803872
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.753	1.0	10.00	0.7782	110	75	125				
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Sample ID N012927-001A-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803873
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.880	1.0	10.00	0.7782	111	75	125	11.75	1.07	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

RunID: ICP2_140711A	EPA 3010A			EPA 6010B		
	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI
Calcium	46	0.058	0.50	mg/L	1	7/11/2014 12:48 PM
Iron	ND	0.0013	0.020	mg/L	1	7/11/2014 12:48 PM
Magnesium	8.2	0.011	0.10	mg/L	1	7/11/2014 12:48 PM
Potassium	2.7	0.084	0.50	mg/L	1	7/15/2014 11:05 AM
Sodium	63	0.19	2.5	mg/L	5	7/15/2014 10:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	ND	0.50			
Iron	0.002	0.020			
Magnesium	ND	0.10			

Sample ID LCS1-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804471
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	10.839	0.50	10.00	0	108 85 115
Iron	0.108	0.020	0.1000	0	108 85 115
Magnesium	10.983	0.10	10.00	0	110 85 115

Sample ID N012897-001B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804473
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	98.887	0.50	10.00	90.46	84.3 75 125
Iron	0.098	0.020	0.1000	0	98.3 75 125
Magnesium	26.216	0.10	10.00	16.58	96.3 75 125

Sample ID N012897-001B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804474
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	101.602	0.50	10.00	90.46	111 75 125 98.89 2.71 20
Iron	0.098	0.020	0.1000	0	98.3 75 125 0.09834 0.0525 20
Magnesium	26.616	0.10	10.00	16.58	100 75 125 26.22 1.51 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID LCS2-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	20.315	0.50	20.00	0	102	85	115				
Sodium	20.381	0.50	20.00	0	102	85	115				

Sample ID N012896-015B-MS2	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.519	0.50	20.00	2.688	104	75	125				

Sample ID N012896-015B-MS2	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	83.151	2.5	25.00	63.10	80.2	75	125				

Sample ID N012896-015B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.302	0.50	25.00	2.688	82.5	75	125	23.52	0.927	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID	N012896-015B-MSD	SampType:	MSD	TestCode:	6010WD_HIN	Units:	mg/L	Prep Date:	7/11/2014	RunNo:	94147		
Client ID:	ZZZZZZ	Batch ID:	46022	TestNo:	EPA 6010B EPA 3010A			Analysis Date:	7/15/2014	SeqNo:	1805646		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium		83.713		2.5	20.00	63.10	103	75	125	83.15	0.673	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012896-015

Client Sample ID: MW-54-059-Q3
Collection Date: 7/8/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46015			PrepDate	7/10/2014	Analyst: CEI	
Arsenic	1.4	0.027	0.10	µg/L	1	7/10/2014 05:08 PM	
Manganese	ND	0.026	0.50	µg/L	1	7/10/2014 05:08 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46015	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: PBW	Batch ID: 46015	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803092
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46015	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: LCSW	Batch ID: 46015	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803093
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.179	0.10	10.00	0	102 85 115
Manganese	100.397	0.50	100.0	0	100 85 115

Sample ID N012896-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZ	Batch ID: 46015	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803097
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.711	0.10	10.00	3.005	97.1 75 125
Manganese	89.508	0.50	100.0	0	89.5 75 125

Sample ID N012896-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZ	Batch ID: 46015	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803098
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	13.028	0.10	10.00	3.005	100 75 125 12.71 2.46 20
Manganese	93.223	0.50	100.0	0	93.2 75 125 89.51 4.07 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
Location Hinkley				Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H2SO4, 4°C		
Project Number 492581.UR.SW.FW				Filtered:	Field	Field	Field	Field	Field	NA	NA	NA		
Project Manager Jennifer Low				Holding Time (days):	28	180	180	180	2	7	7	28		
Sample Manager Jim Hanvey					Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIS) FF Ca,Fe,K,Mg,Na	Metals Dissolved (6020AFF) FF As,Cr,Mn	Metals Dissolved (6020AFF) FF Cr	Anions (E300.0) FF NO3N,SO4,Cl	TDS (SM2540C)	Alkalinity (SM2320B)	TOC (E5310)		
Cell Number (404) 229-2181														
Fax Number (510) 622-9136														
Task Order 59														
Project 2014-GMP-059-Q3														
Turnaround Time 10 Days														
Shipping Date:														
COC Number:														
SAMPLE ID	DATE	TIME	Matrix											
MW-826-059-Q3	7/8/2014	1502	Water	X									1	DM
MW-147D-059-Q3	7/8/2014	1413	Water	X			X						2	DM
MW-147S-059-Q3	7/8/2014	1451	Water	X			X						2	DM
MW-148S-059-Q3	7/8/2014	1329	Water	X			X						2	DM
MW-168D-059-Q3	7/8/2014	1204	Water	X			X						2	DM
MW-168S-059-Q3	7/8/2014	1135	Water	X			X						2	DM
MW-169D-059-Q3	7/8/2014	1020	Water	X			X						2	DM
MW-169S1-059-Q3	7/8/2014	0934	Water	X			X						2	DM
MW-169S2-059-Q3	7/8/2014	0837	Water	X			X						2	DM
MW-825-059-Q3	7/8/2014	1540	Water	X									1	JM
EX-17-059-Q3	7/8/2014	1122	Water	X			X						2	JM
MW-44B-059-Q3	7/8/2014	1520	Water	X			X		X				3	JM
MW-45A-059-Q3	7/8/2014	0846	Water	X			X		X				3	JM
MW-45B-059-Q3	7/8/2014	0934	Water	X			X		X				3	JM
MW-54-059-Q3	7/8/2014	1422	Water	X	X	X		X	X	X			4	JM
MW-66A-059-Q3	7/8/2014	1027	Water	X			X		X				3	JM

Signatures Approved by <i>K. Blum</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7/8/14 1630 7/8/14 1630 7/8/14 1630 7/8/14 1635 7/8/14 1630 7/8/14 1630	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>2000/3500 12#2</i> Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name	PGE Hinkley	Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
Location	Hinkley	Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H2SO4, 4°C		
Project Number	492581.UR.SW.FW	Filtered:	Field	Field	Field	Field	Field	NA	NA	NA		
Project Manager	Jennifer Low	Holding Time (days):	28	180	180	180	2	7	7	28		
Sample Manager	Jim Hanvey		Cr(VI) (E218.6) FF	Metals Dissolved (6010BDI)s FF Ca,Fe,K,Mg,Na	Metals Dissolved (6020AFF) FF As,Cr,Mn	Metals Dissolved (6020AFF) FF Cr	Anions (E300.0) FF NO3N,SO4,Cl	TDS (SM2540C)	Alkalinity (SM2320B)	TOC (E5310)		
Cell Number	(404) 229-2181											
Fax Number	(510) 622-9136											
Task Order	59											
Project	2014-GMP-059-Q3											
Turnaround Time	10 Days											
Shipping Date:												
COC Number:												
SAMPLE ID	DATE	TIME	Matrix									

MW-76D-059-Q3	7/8/2014	1231	Water	X			X					2	JM
MW-76S-059-Q3	7/8/2014	1333	Water	X			X					2	JM
MW-824-059-Q3	7/8/2014	1541	Water	X								1	JD
MW-121D-059-Q3	7/8/2014	1515	Water	X			X					2	JD
MW-121S-059-Q3	7/8/2014	1411	Water	X			X					2	TH
MW-122D-059-Q3	7/8/2014	1423	Water	X			X					2	JD
MW-153S-059-Q3	7/8/2014	1057	Water	X			X					2	JD
MW-165D-059-Q3	7/8/2014	1159	Water	X			X					2	JD
MW-165S-059-Q3	7/8/2014	1249	Water	X			X					2	JD
MW-202D-059-Q3	7/8/2014	0945	Water	X			X					2	JD
MW-202S-059-Q3	7/8/2014	0857	Water	X			X					2	JD
MW-827-059-Q3	7/8/2014	1420	Water	X								1	LB
MW-15-059-Q3	7/8/2014	0840	Water	X			X					2	LB
MW-33A-059-Q3	7/8/2014	1027	Water	X			X	X		X		6	LB
MW-33B-059-Q3	7/8/2014	0939	Water	X			X	X		X		6	LB
MW-35-059-Q3	7/8/2014	1111	Water	X			X	X		X		6	LB

N012896-17

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Approved by	<i>K. Blum</i>	Date/Time	7/8/14 1630	Shipping Details	ATTN:	Special Instructions:
Sampled by	<i>D. [Signature]</i>	Date/Time	7/8/14 1630	Method of Shipment:		Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Relinquished by	<i>D. [Signature]</i>	Date/Time	7/8/14 1630	On Ice: <input checked="" type="radio"/> yes / no 3090/2-60		
Received by	<i>[Signature]</i>	Date/Time	7/8/14 1630	Airbill No: <i>1842</i>		
Relinquished by	<i>[Signature]</i>	Date/Time	7/8/14 1630	Lab Name: Advanced Technology Laboratories		
Received by	<i>[Signature]</i>	Date/Time	7/8/14 1630	Lab Phone: (702) 307-2659		

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:					Container: Preservatives: Filtered: Holding Time (days):	250 ml Poly (NH4)2SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C	Field Field Field Field Field NA NA NA	28 180 180 180 2 7 7 28	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIS) FF Ca,Fe,K,Mg,Na Metals Dissolved (6020AFF) FF As,Cr,Mn Metals Dissolved (6020AFF) FF Cr Metals Dissolved (6020AFF) FF NO3N,SO4,Cl Anions (E300.0) FF NO3N,SO4,Cl TDS (SM2540C) Alkalinity (SM2320B) TOC (E5310)	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	MATRIX									
MW-48-059-Q3	7/8/2014	1446	Water	X								2 LB
MW-51-059-Q3	7/8/2014	1248	Water	X								2 LB
MW-52-059-Q3	7/8/2014	1205	Water	X								2 LB
MW-53-059-Q3	7/8/2014	1353	Water	X								2 LB
MW-823-059-Q3	7/8/2014	1240	Water	X								1 TH
MW-997-059-Q3	7/8/2014	0921	Water	X								2 TH
SC-MW-21D-059-Q3	7/8/2014	0911	Water	X								2 TH
SC-MW-22D-059-Q3	7/8/2014	1035	Water	X								2 TH
SC-MW-23D-059-Q3	7/8/2014	1223	Water	X								2 TH
TOTAL NUMBER OF CONTAINERS										95		

NO12896-23

-34

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-39

-40

-41

Approved by <i>K. Blinn</i> Sampled by <i>D. H. A.</i> Relinquished by <i>D. H. A.</i> Received by <i>Shawn Duffy</i> Relinquished by <i>Shawn Duffy</i> Received by <i>Shawn Duffy</i>	Signatures Date/Time 7/8/14 1630 7/8/14 1636 7/8/14 1630 7/8/14 1635 7/8/14 1635 7/8/14 1630	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2 - FC Airbill No: <i>1RA2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/8/2014 Workorder: N012896
 Rep sample Temp (Deg C): 2.9/3.3/3.9/2.6/2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC *ACortes* 7/9/14

Reviewed By: *gog* 07/14/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012896-012C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.0375-62.9943)*1000000}{100}$$

432 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 430 \text{ mg/L}$$


7/10/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/9/2014								TDS/CONDUCTIVITY
Date Finished: 7/10/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46012	100	63.3746	63.3746	0	1	0.00		
LCS-46012	100	63.5102	63.6085	983	1	983.00		
N012886-001C	100	63.9947	64.0315	368	1	368.00	590	0.62
N012886-001C-DUP	100	63.9774	64.0146	372	1	372.00	590	0.63
N012886-002C	55	64.1103	64.2367	1264	1.8181818	2298.18	2870	0.80
N012886-003C	100	64.2738	64.3289	551	1	551.00	871	0.63
N012896-012C	100	62.9943	63.0375	432	1	432.00	666	0.65
N012896-013C	100	63.8032	63.8683	651	1	651.00	993	0.66
N012896-014C	100	63.7801	63.8289	488	1	488.00	713	0.68
N012896-015D	100	61.3625	61.3971	346	1	346.00	559	0.62
N012896-016C	100	62.4475	62.5162	687	1	687.00	1043	0.66
N012896-030C	100	60.6368	60.743	1062	1	1062.00	1528	0.70
N012896-031C	100	60.9855	61.065	795	1	795.00	1179	0.67
N012896-032C	100	61.7341	61.7888	547	1	547.00	873	0.63

Jmer
7/10/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012896-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.194867 * 1 \\ &= 0.194867\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.19}$$

Nancy 7/14/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012896-016A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 3.3752 * 1 \\ &= 3.3752\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 3.4$$

 7/21/2014

Sample ID: **N012896-015D @ pH 7.54**

A. Standardization of Sulfuric Acid (titrant):

$$\text{Normality of acid} = (A)(B)/(53.00)(C)$$

Where:

A, grams weighed for Na₂CO₃ solution (Na₂CO₃ Standardization Solution)

B, mL Na₂CO₃ solution taken for titration, and

C, ml of sulfuric acid used to inflection point

Spike Standards

Na₂CO₃ Standardization Solution, ACS Grade (1.00 ml = 2500ug as CaCO₃):

Dissolve 2.650 grams of Na₂CO₃ in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock NaHCO₃, ACS Grade (1.00 ml = 5000 ug as CaCO₃):

Dissolve 0.8398 grams of NaHCO₃ in distilled water and dilute to 1 liter.

Therefore,

$$\text{Normality of Acid} = (2.65\text{g/L}) (5\text{mL}) / (53.00) (10.95\text{mL})$$

$$= \mathbf{0.02283\ N}$$

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

$$\text{Total Alkalinity (as CaCO}_3\text{), mg/L} = M_{\text{vol.}} * N \text{ H}_2\text{SO}_4 * \text{DF} * 1000$$

Where:

M_{vol.}, volume titrant used to reach pH 4.5, ml

N, Normality of H₂SO₄

DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

$$\text{Total Alkalinity (as CaCO}_3\text{), mg/L} = (5.85) (0.02283\ \text{N}) (1) * 1000$$

$$= 133.55\ \text{mg/L}$$

Reporting results in two significant figures,

$$= 130.00\ \text{mg/L as CaCO}_3$$

mer
7/9/2014



C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

$$\begin{aligned} \text{P alkalinity, mg/L as CaCO}_3 &= P_{\text{vol.}} * N \text{ H}_2\text{SO}_4 * \text{DF} * 1000 \\ &= (0) (0.02283 \text{ N}) (1) * 1000 \\ &= \mathbf{0} \end{aligned}$$

Total Alkalinity

$$\begin{aligned} \text{T alkalinity, mg/L as CaCO}_3 &= M_{\text{vol.}} * N \text{ H}_2\text{SO}_4 * \text{DF} * 1000 \\ &= (5.85 \text{ mL}) (0.02283) (1) * 1000 \\ &= \mathbf{133.55 \text{ mg/L as CaCO}_3} \end{aligned}$$

Where:

- $P_{\text{vol.}}$ - volume titrant used to reach pH 8.3, ml
- $M_{\text{vol.}}$ - volume titrant used to reach pH 4.5, ml
- N - Normality of H_2SO_4
- DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3 , HCO_3 alkalinities as CaCO_3 will be calculated as follows:

Result of Titration	OH Alkalinity as CaCO_3	CO_3 Alkalinity as CaCO_3	HCO_3 Alkalinity as CaCO_3
$P = 0$	0	0	T
$P < \frac{1}{2} T$	0	2P	$T - 2P$
$P = \frac{1}{2} T$	0	2P	0
$P > \frac{1}{2} T$	$2P - T$	$2(T - P)$	0
$P = T$	T	0	0

Therefore,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{130.00 \text{ mg/L}}$$

Reporting results in two significant figures,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{130.00 \text{ mg/L}}$$

gmer
7/9/2014



Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


A = mg/L, IC calculated concentration
DF = dilution factor

For **N012896-015C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.631 * 1 \\ &= 0.631 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = \mathbf{0.63}$$

 7/22/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012896-030D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [1.01190] [1] - 0.04960$$

$$\text{TOC} = 0.96230$$

Reporting results in two significant figures,

$$\text{TOC} = 0.96 \text{ mg/L}$$

since result is <PQL,

$$\text{TOC} = \text{ND}$$

PS 7/22/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Water

FORMULA:

Calculate the Sodium concentration, in mg/L, in the original sample as follows:

$$\text{Sodium, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012896-015B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Sodium, mg/L} &= 12.619905 * 5 * (25/25) \\ &= 63.099525 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Sodium, mg/L} = 63$$

 7/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012896
 Test Method: EPA 6010
 Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
 Batch No.: 46022

Instrument ID: ICP-02
 Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Dilution test failed to Mg. However, PS @2X passed criteria.

Dilution test failed to Ca.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012897-001B-DT 5X	Calcium	mg/L	114.123659	FAILED	90.45510776	26.17%	10
N012897-001B-DT 5X	Iron	mg/L	0	NA	0		10
N012897-001B-DT 5X	Magnesium	mg/L	18.31054026	FAILED	16.5820106	10.42%	10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012896
Test Method: EPA 6010
Analysis Date: 07/15/14

Dilution Test Summary

Matrix: Water
Batch No.: 46022

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Dilution Test is not applicable for K. The calculated concentration was < 25X the RL. Dilution Test failed for Na.
However the PS @2X and @5X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012896-015B-DT 5X	Potassium	mg/L	2.44267759	NA	2.687889	9.12%	10
N012896-015B-DT 25X	Sodium	mg/L	69.8664488	FAIL	63.099525	10.72%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012897-001B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94107						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1804472						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	103.540	1.0	5.000	90.46	262	80	120				S
Iron	4.827	0.040	5.000	0	96.5	80	120				
Magnesium	22.239	0.20	5.000	16.58	113	80	120				

Sample ID: N012896-015B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94147						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 7/15/2014	SeqNo: 1805641						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium	43.235	1.0	40.00	2.688	101	80	120				
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Sample ID: N012896-015B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94147						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B	EPA 3010A	Analysis Date: 7/15/2014	SeqNo: 1805642						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sodium	162.735	2.5	100.0	63.10	99.6	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012896-023B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 4.4854451906 * 1 * (25/25) \\ &= 4.4854451906 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 4.5$$

 7/21/2014

ASSET Laboratories**ICP-Metals in Water**

Work Order No.: N012896
Test Method: EPA 6020
Analysis Date: 7/10/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46015

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012896-002B-DT 5X	Chromium	µg/L	1.726176563	NA	2.068386585	16.54%	10
N012896-002B-DT 5X	Arsenic	µg/L	2.986074141	PASS	3.004822574	0.62%	10
N012896-002B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012896
Test Method: EPA 6020
Analysis Date: 7/10/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46016

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012896-024B-DT 5X	Chromium	µg/L	0.994314389	NA	1.364014474	27.10%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012896-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46015	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802059							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.507	2.0	20.00	2.068	97.2	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012896-024B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802969						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.201	2.0	20.00	1.364	94.2	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

CLIENT: CH2M HILL
Work Order: N012896
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012896-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46015	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1803096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.621	0.20	20.00	3.005	103	80	120				
Manganese	193.712	1.0	200.0	0	96.9	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 22, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012897

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 08, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012897

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012897
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012897-001A	MW-933-059b-Q3	Water	7/8/2014 8:33:00 AM	7/8/2014	7/22/2014
N012897-001B	MW-933-059b-Q3	Water	7/8/2014 8:33:00 AM	7/8/2014	7/22/2014
N012897-002A	SC-MW-21S-059b-Q3	Water	7/8/2014 8:23:00 AM	7/8/2014	7/22/2014
N012897-002B	SC-MW-21S-059b-Q3	Water	7/8/2014 8:23:00 AM	7/8/2014	7/22/2014
N012897-003A	SC-MW-22S-059b-Q3	Water	7/8/2014 9:56:00 AM	7/8/2014	7/22/2014
N012897-003B	SC-MW-22S-059b-Q3	Water	7/8/2014 9:56:00 AM	7/8/2014	7/22/2014
N012897-004A	SC-MW-23S-059b-Q3	Water	7/8/2014 11:21:00 AM	7/8/2014	7/22/2014
N012897-004B	SC-MW-23S-059b-Q3	Water	7/8/2014 11:21:00 AM	7/8/2014	7/22/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012897-001

Client Sample ID: MW-933-059b-Q3
Collection Date: 7/8/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090			PrepDate		Analyst: RB
Hexavalent Chromium	420	0.80	10	µg/L	50	7/9/2014 06:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-21S-059b-Q3
Lab Order: N012897 **Collection Date:** 7/8/2014 8:23:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012897-002

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC6_140709A** QC Batch: **R94090** PrepDate Analyst: **RB**
Hexavalent Chromium 440 0.80 10 µg/L 50 7/9/2014 07:05 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-22S-059b-Q3
Lab Order: N012897 **Collection Date:** 7/8/2014 9:56:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012897-003

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC6_140709A** QC Batch: **R94090** PrepDate Analyst: **RB**
Hexavalent Chromium ND 0.016 0.20 µg/L 1 7/9/2014 06:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-23S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090	PrepDate	Analyst: RB
Hexavalent Chromium	ND 0.016 0.20	µg/L	1 7/9/2014 06:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94090	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090
Client ID: PBW	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802508
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.20			
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Sample ID LCS-R94090	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090
Client ID: LCSW	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802509
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	5.070	0.20	5.000	0	101 90 110
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Sample ID N012898-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802511
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	1.706	0.20			1.769 3.65 20
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Sample ID N012898-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802512
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	2.828	0.20	1.000	1.769	106 90 110
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Sample ID N012898-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802514
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	1.028	0.20	1.000	0	103 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802515						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110	1.028	2.09	20	

Sample ID N012898-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802519						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.373	0.20	1.000	1.392	98.1	90	110				

Sample ID N012898-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.735	0.20	1.000	0.7689	96.6	90	110				

Sample ID N012898-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.229	0.20	1.000	2.300	92.9	90	110				

Sample ID N012898-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.819	0.20	1.000	0.8653	95.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.395	0.20	1.000	1.410	98.5	90	110				

Sample ID N012898-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802531						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.334	0.20	1.000	1.417	91.7	90	110				

Sample ID N012898-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.114	0.20	1.000	0.1277	98.6	90	110				

Sample ID N012898-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802535						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.036	0.20	1.000	0.08870	94.8	90	110				

Sample ID N012898-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802539						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.347	0.20	1.000	0.3568	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802541						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N012898-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.877	0.20	1.000	0.8182	106	90	110				

Sample ID N012897-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802550						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.032	0.20	1.000	0	103	90	110				

Sample ID N012897-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802551						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0.05380	96.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012897-001

Client Sample ID: MW-933-059b-Q3
Collection Date: 7/8/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/11/2014 12:53 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-21S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 8:23:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate: 7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/11/2014 01:20 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-22S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 9:56:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate: 7/11/2014	Analyst: CEI
Iron	0.69 0.0013	0.020	mg/L 1 7/11/2014 01:34 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-23S-059b-Q3
Lab Order: N012897 **Collection Date:** 7/8/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012897-004

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140711A** QC Batch: **46022** PrepDate: **7/11/2014** Analyst: **CEI**
Iron 0.034 0.0013 0.020 mg/L 1 7/11/2014 01:38 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.002 0.020

Sample ID LCS1-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804471
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.108 0.020 0.1000 0 108 85 115

Sample ID N012897-001B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804473
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.098 0.020 0.1000 0 98.3 75 125

Sample ID N012897-001B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804474
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.098 0.020 0.1000 0 98.3 75 125 0.09834 0.0525 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012897-001

Client Sample ID: MW-933-059b-Q3
Collection Date: 7/8/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016			PrepDate	7/10/2014	Analyst: CEI
Arsenic	0.86	0.027	0.10	µg/L	1	7/10/2014 08:28 PM
Manganese	8.3	0.026	0.50	µg/L	1	7/10/2014 08:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-21S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 8:23:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016			PrepDate	7/10/2014		Analyst: CEI
Arsenic	0.84	0.027	0.10		µg/L	1	7/10/2014 08:33 PM
Manganese	7.9	0.026	0.50		µg/L	1	7/10/2014 08:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-22S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 9:56:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46016			PrepDate	7/10/2014	Analyst: CEI
Arsenic	2.4	0.027	0.10		µg/L	1 7/10/2014 08:39 PM
Manganese	320	0.13	2.5		µg/L	5 7/11/2014 12:21 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-23S-059b-Q3
Lab Order: N012897	Collection Date: 7/8/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012897-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140710A	QC Batch: 46016			PrepDate	7/10/2014		Analyst: CEI
Arsenic	2.0	0.027	0.10		µg/L	1	7/10/2014 08:44 PM
Manganese	290	0.13	2.5		µg/L	5	7/11/2014 12:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46016	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: PBW	Batch ID: 46016	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803104
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	0.182	0.50			

Sample ID LCS-46016	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: LCSW	Batch ID: 46016	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803105
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.384	0.10	10.00	0	104 85 115
Manganese	104.119	0.50	100.0	0	104 85 115

Sample ID N012896-024B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZ	Batch ID: 46016	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803111
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	22.800	0.10	10.00	12.86	99.4 75 125
Manganese	91.772	0.50	100.0	0	91.8 75 125

Sample ID N012896-024B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075
Client ID: ZZZZZ	Batch ID: 46016	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/10/2014	SeqNo: 1803112
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	22.951	0.10	10.00	12.86	101 75 125 22.80 0.660 20
Manganese	94.631	0.50	100.0	0	94.6 75 125 91.77 3.07 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As, Mn	Number of Containers	COMMENTS
SAMPLE ID DATE TIME Matrix									
MW-933-059b-Q3	7/8/2014	0833	Water	X	X	X	ND12897-1 ↓ -2 -3 -4	2	TH
SC-MW-21S-059b-Q3	7/8/2014	0823	Water	X	X	X		2	TH
SC-MW-22S-059b-Q3	7/8/2014	0956	Water	X	X	X		2	TH
SC-MW-23S-059b-Q3	7/8/2014	1121	Water	X	X	X		2	TH
TOTAL NUMBER OF CONTAINERS								8	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/8/14 1100 07/08/14 1160 07/08/14 1160 7/8/14 1800 7/8/14 1800 7/8/14 1800	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / <input type="checkbox"/> no 3.3°C Airbill No: IR#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/8/2014 Workorder: N012897
 Rep sample Temp (Deg C): 3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/9/14

Reviewed By:

gog 07/10/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012897-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 8.4233 * 50 \\ &= 421.165\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 420$$

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012897-003B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.691630795 * 1 * (25/25) \\ &= 0.691630795 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.69$$

 7/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012897
Test Method: EPA 6010
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46022

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012897-001B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012897-001B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94107						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1804472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	4.827	0.040	5.000	0	96.5	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012897-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 0.85685164369 * 1 * (25/25) \\ &= 0.85685164369 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 0.86$$

 7/21/2014

CLIENT: CH2M HILL
Work Order: N012897
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012896-024B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46016	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1803110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	33.451	0.20	20.00	12.86	103	80	120				
Manganese	191.292	1.0	200.0	0	95.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 15, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012898

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 08, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012898

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 14-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012898
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012898-001A	30E-01-059-Q3	Groundwater	7/8/2014 8:13:00 AM	7/8/2014	7/15/2014
N012898-001B	30E-01-059-Q3	Groundwater	7/8/2014 8:13:00 AM	7/8/2014	7/15/2014
N012898-002A	BGS-48-059-Q3	Groundwater	7/8/2014 8:33:00 AM	7/8/2014	7/15/2014
N012898-002B	BGS-48-059-Q3	Groundwater	7/8/2014 8:33:00 AM	7/8/2014	7/15/2014
N012898-003A	34-77-059-Q3	Groundwater	7/8/2014 9:02:00 AM	7/8/2014	7/15/2014
N012898-003B	34-77-059-Q3	Groundwater	7/8/2014 9:02:00 AM	7/8/2014	7/15/2014
N012898-004A	BGS-14-059-Q3	Groundwater	7/8/2014 9:36:00 AM	7/8/2014	7/15/2014
N012898-004B	BGS-14-059-Q3	Groundwater	7/8/2014 9:36:00 AM	7/8/2014	7/15/2014
N012898-005A	21N-03-059-Q3	Groundwater	7/8/2014 10:09:00 AM	7/8/2014	7/15/2014
N012898-005B	21N-03-059-Q3	Groundwater	7/8/2014 10:09:00 AM	7/8/2014	7/15/2014
N012898-006A	02-13-059-Q3	Groundwater	7/8/2014 11:07:00 AM	7/8/2014	7/15/2014
N012898-006B	02-13-059-Q3	Groundwater	7/8/2014 11:07:00 AM	7/8/2014	7/15/2014
N012898-007A	04N-04-059-Q3	Groundwater	7/8/2014 11:46:00 AM	7/8/2014	7/15/2014
N012898-007B	04N-04-059-Q3	Groundwater	7/8/2014 11:46:00 AM	7/8/2014	7/15/2014
N012898-008A	15-06-059-Q3	Groundwater	7/8/2014 12:33:00 PM	7/8/2014	7/15/2014
N012898-008B	15-06-059-Q3	Groundwater	7/8/2014 12:33:00 PM	7/8/2014	7/15/2014
N012898-009A	15-05-059-Q3	Groundwater	7/8/2014 12:49:00 PM	7/8/2014	7/15/2014
N012898-009B	15-05-059-Q3	Groundwater	7/8/2014 12:49:00 PM	7/8/2014	7/15/2014
N012898-010A	15-08-059-Q3	Groundwater	7/8/2014 1:16:00 PM	7/8/2014	7/15/2014
N012898-010B	15-08-059-Q3	Groundwater	7/8/2014 1:16:00 PM	7/8/2014	7/15/2014
N012898-011A	99-04-059-Q3	Groundwater	7/8/2014 1:26:00 PM	7/8/2014	7/15/2014
N012898-011B	99-04-059-Q3	Groundwater	7/8/2014 1:26:00 PM	7/8/2014	7/15/2014
N012898-012A	09-01-059-Q3	Groundwater	7/8/2014 1:50:00 PM	7/8/2014	7/15/2014
N012898-012B	09-01-059-Q3	Groundwater	7/8/2014 1:50:00 PM	7/8/2014	7/15/2014
N012898-013A	99-03-059-Q3	Groundwater	7/8/2014 2:00:00 PM	7/8/2014	7/15/2014
N012898-013B	99-03-059-Q3	Groundwater	7/8/2014 2:00:00 PM	7/8/2014	7/15/2014
N012898-014A	34-63-059-Q3	Groundwater	7/8/2014 2:33:00 PM	7/8/2014	7/15/2014
N012898-014B	34-63-059-Q3	Groundwater	7/8/2014 2:33:00 PM	7/8/2014	7/15/2014
N012898-015A	34-60-059-Q3	Groundwater	7/8/2014 3:32:00 PM	7/8/2014	7/15/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012898
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012898-015B	34-60-059-Q3	Groundwater	7/8/2014 3:32:00 PM	7/8/2014	7/15/2014
N012898-016A	34-15-059-Q3	Groundwater	7/8/2014 4:09:00 PM	7/8/2014	7/15/2014
N012898-016B	34-15-059-Q3	Groundwater	7/8/2014 4:09:00 PM	7/8/2014	7/15/2014



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-001

Client Sample ID: 30E-01-059-Q3
Collection Date: 7/8/2014 8:13:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/9/2014 11:10 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/10/2014 11:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-002

Client Sample ID: BGS-48-059-Q3
Collection Date: 7/8/2014 8:33:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 11:06 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 11:41 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 11:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-003

Client Sample ID: 34-77-059-Q3
Collection Date: 7/8/2014 9:02:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/11/2014 12:09 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/10/2014 12:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-004

Client Sample ID: BGS-14-059-Q3
Collection Date: 7/8/2014 9:36:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/9/2014 12:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/10/2014 12:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-005

Client Sample ID: 21N-03-059-Q3
Collection Date: 7/8/2014 10:09:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	4.0	0.016	0.20		µg/L	1	7/11/2014 12:47 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	7/10/2014 12:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-006

Client Sample ID: 02-13-059-Q3
Collection Date: 7/8/2014 11:07:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	0.77	0.016	0.20		µg/L	1	7/9/2014 01:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 12:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-007

Client Sample ID: 04N-04-059-Q3
Collection Date: 7/8/2014 11:46:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/9/2014 01:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/10/2014 12:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-008

Client Sample ID: 15-06-059-Q3
Collection Date: 7/8/2014 12:33:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	0.87	0.016	0.20		µg/L	1	7/9/2014 02:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 12:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-009

Client Sample ID: 15-05-059-Q3
Collection Date: 7/8/2014 12:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140710B	QC Batch: R94092				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/11/2014 01:06 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/10/2014 12:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-010

Client Sample ID: 15-08-059-Q3
Collection Date: 7/8/2014 1:16:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/9/2014 03:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/10/2014 12:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-011

Client Sample ID: 99-04-059-Q3
Collection Date: 7/8/2014 1:26:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/9/2014 03:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/10/2014 12:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-012

Client Sample ID: 09-01-059-Q3
Collection Date: 7/8/2014 1:50:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	0.13	0.012	0.060		µg/L	1	7/11/2014 11:37 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 03:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 01:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-013

Client Sample ID: 99-03-059-Q3
Collection Date: 7/8/2014 2:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	0.063	0.012	0.060		µg/L	1	7/11/2014 12:09 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 04:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 01:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-014

Client Sample ID: 34-63-059-Q3
Collection Date: 7/8/2014 2:33:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	0.36	0.016	0.20		µg/L	1	7/9/2014 04:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 01:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-015

Client Sample ID: 34-60-059-Q3
Collection Date: 7/8/2014 3:32:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140711A	QC Batch: R94089				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/11/2014 12:59 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/9/2014 05:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 14-Jul-14

CLIENT: CH2M HILL
Lab Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012898-016

Client Sample ID: 34-15-059-Q3
Collection Date: 7/8/2014 4:09:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140709A	QC Batch: R94090				PrepDate		Analyst: RB
Hexavalent Chromium	0.82	0.016	0.20		µg/L	1	7/9/2014 05:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140710A	QC Batch: 46014				PrepDate	7/10/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/10/2014 01:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94089	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: PBW	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802460
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94089	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: LCSW	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802461
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.190 0.060 0.2000 0 95.1 90 110

Sample ID N012898-002ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802463
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.057 0.060 0.05908 0 20

Sample ID N012898-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802464
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.246 0.060 0.2000 0.05908 93.5 90 110

Sample ID N012898-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089
Client ID: ZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.328 0.060 0.2000 0.1335 97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012898-012AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.326	0.060	0.2000	0.1335	96.0	90	110	0.3276	0.615	20	

Sample ID N012898-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.251	0.060	0.2000	0.06253	94.3	90	110				

Sample ID N012898-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0.01293	91.4	90	110				

Sample ID N012896-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012896-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.392	0.060	0.2000	0.1949	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012896-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802479							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110				

Sample ID N012896-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802481							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0	109	90	110				

Sample ID N012896-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802485							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0	109	90	110				

Sample ID N012896-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802487							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.231	0.060	0.2000	0.02975	101	90	110				

Sample ID N012896-028AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802489							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012896-037AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802491						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Sample ID N012896-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01358	102	90	110				

Sample ID N012896-041AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802497						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0	107	90	110				

Sample ID N012896-039AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94089						
Client ID: ZZZZZZ	Batch ID: R94089	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01323	94.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94090	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: PBW	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94090	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: LCSW	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802509						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.070	0.20	5.000	0	101	90	110				
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Sample ID N012898-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802511						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.706	0.20						1.769	3.65	20	
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Sample ID N012898-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802512						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.828	0.20	1.000	1.769	106	90	110				
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Sample ID N012898-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802514						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.028	0.20	1.000	0	103	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802515						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110	1.028	2.09	20	

Sample ID N012898-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802519						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.373	0.20	1.000	1.392	98.1	90	110				

Sample ID N012898-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.735	0.20	1.000	0.7689	96.6	90	110				

Sample ID N012898-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.229	0.20	1.000	2.300	92.9	90	110				

Sample ID N012898-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.819	0.20	1.000	0.8653	95.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.395	0.20	1.000	1.410	98.5	90	110				

Sample ID N012898-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802531						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.334	0.20	1.000	1.417	91.7	90	110				

Sample ID N012898-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.114	0.20	1.000	0.1277	98.6	90	110				

Sample ID N012898-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802535						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.036	0.20	1.000	0.08870	94.8	90	110				

Sample ID N012898-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802539						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.347	0.20	1.000	0.3568	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012898-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802541						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N012898-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.877	0.20	1.000	0.8182	106	90	110				

Sample ID N012897-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802550						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.032	0.20	1.000	0	103	90	110				

Sample ID N012897-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94090						
Client ID: ZZZZZZ	Batch ID: R94090	TestNo: EPA 218.6		Analysis Date: 7/9/2014	SeqNo: 1802551						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0.05380	96.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94092	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: PBW	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94092	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: LCSW	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.973	0.20	5.000	0	99.5	90	110				
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Sample ID N012896-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				
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Sample ID N012896-038A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802650						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012896-038A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZ	Batch ID: R94092	TestNo: EPA 218.6		Analysis Date: 7/10/2014	SeqNo: 1802651						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.025	0.20	1.000	0	103	90	110	1.001	2.38	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012896-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802653							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.015	0.20	1.000	0	102	90	110				

Sample ID N012896-041A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6	Analysis Date: 7/10/2014	SeqNo: 1802655							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID N012898-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802657							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.035	0.20	1.000	1.057	97.8	90	110				

Sample ID N012898-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802661							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.981	0.20	5.000	4.009	99.5	90	110				

Sample ID N012898-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94092						
Client ID: ZZZZZZ	Batch ID: R94092	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802663							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.393	0.20	1.000	1.380	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46014	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: PBW	Batch ID: 46014	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46014	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: LCSW	Batch ID: 46014	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.982 1.0 10.00 0 99.8 85 115

Sample ID N012898-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46014	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.305 1.0 10.00 1.771 95.3 75 125

Sample ID N012898-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/10/2014	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46014	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802020						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.115 1.0 10.00 1.771 93.4 75 125 11.30 1.69 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr				
30E-01-059-Q3	7/8/14	0813	GW	X	X	NO12898-1 ↓ -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14 -15 ↓	2	Walker
BGS-48-059-Q3	7/8/14	0833	GW	X	X		2	Banks
34-77-059-Q3	7/8/14	0902	GW	X	X		2	Garrison
BGS-14-059-Q3	7/8/14	0936	GW	X	X		2	Huerta
21N-03-059-Q3	7/8/14	1009	GW	X	X		2	Eugenio
02-13-059-Q3	7/8/14	1107	GW	X	X		2	Tapia
04N-04-059-Q3	7/8/14	1146	GW	X	X		2	Moon
15-06-059-Q3	7/8/14	1233	GW	X	X		2	Brodie
15-05-059-Q3	7/8/14	1249	GW	X	X		2	Brodie
15-08-059-Q3	7/8/14	1316	GW	X	X		2	Brodie
99-04-059-Q3	7/8/14	1326	GW	X	X		2	
09-01-059-Q3	7/8/14	1350	GW	X	X		2	Phan
99-03-059-Q3	7/8/14	1400	GW	X	X		2	
34-63-059-Q3	7/8/14	1433	GW	X	X		2	Marroquin
34-60-059-Q3	7/8/14	1532	GW	X	X		2	PG&E
TOTAL NUMBER OF CONTAINERS							30	

Approved by <i>K. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/8/14 1620 7/8/14 1622 7/8/14 1622 7/8/14 1622 7/8/14 1630 7/8/14 1630	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3-40 Airbill No: <i>12#</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly (NH4)2SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C		Filtered: Field Field	Holding Time (days): 28 180	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix							
34-15-059-Q3	7/8/14	1609	GW	X	X			2	Kearney	
								TOTAL NUMBER OF CONTAINERS	2	

Approved by: <i>J. Blum</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>	Signatures Date/Time 7/8/14 1620 07/08/14 1622 07/08/14 1622 7/5/14 1622 7/8/14 1620 7/8/14 1620	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2.9°C Airbill No: <i>IR#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/8/2014 Workorder: N012898
 Rep sample Temp (Deg C): 3.4/2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/9/14

Reviewed By: gog 07/10/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012898-012A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.133503 * 1 \\ &= 0.133503\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.13$$

Nancy 7/14/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012898-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 2.3001 * 1 \\ &= 2.3001\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.3$$

Henry 7/14/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012898-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.77082397475801 * 1 * (25/25) \\ &= 1.77082397475801 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.8$$

Nancy 7/14/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012898
Test Method: EPA 6020
Analysis Date: 7/10/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46014

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012898-001B-DT 5X	Chromium	µg/L	1.443343293	NA	1.770823975	18.49%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012898
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012898-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94075						
Client ID: ZZZZZ	Batch ID: 46014	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/10/2014	SeqNo: 1802018							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.324	2.0	20.00	1.771	97.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 15, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012906

RE: PGE Hinkley, 492584.UR.DM.FW


Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 09, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012906

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (1.790 ug/L) and hexavalent chromium (0.707 ug/L) for sample N012906-009 (34-62-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.749 and 1.604 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 15-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012906
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012906-001A	27-16-059-Q3	Groundwater	7/9/2014 8:05:00 AM	7/9/2014	7/16/2014
N012906-001B	27-16-059-Q3	Groundwater	7/9/2014 8:05:00 AM	7/9/2014	7/16/2014
N012906-002A	22-53-059-Q3	Groundwater	7/9/2014 8:22:00 AM	7/9/2014	7/16/2014
N012906-002B	22-53-059-Q3	Groundwater	7/9/2014 8:22:00 AM	7/9/2014	7/16/2014
N012906-003A	22-23-059-Q3	Groundwater	7/9/2014 8:54:00 AM	7/9/2014	7/16/2014
N012906-003B	22-23-059-Q3	Groundwater	7/9/2014 8:54:00 AM	7/9/2014	7/16/2014
N012906-004A	28-74-059-Q3	Groundwater	7/9/2014 9:43:00 AM	7/9/2014	7/16/2014
N012906-004B	28-74-059-Q3	Groundwater	7/9/2014 9:43:00 AM	7/9/2014	7/16/2014
N012906-005A	28-88-059-Q3	Groundwater	7/9/2014 10:06:00 AM	7/9/2014	7/16/2014
N012906-005B	28-88-059-Q3	Groundwater	7/9/2014 10:06:00 AM	7/9/2014	7/16/2014
N012906-006A	33-03-059-Q3	Groundwater	7/9/2014 11:12:00 AM	7/9/2014	7/16/2014
N012906-006B	33-03-059-Q3	Groundwater	7/9/2014 11:12:00 AM	7/9/2014	7/16/2014
N012906-007A	11-10-059-Q3	Groundwater	7/9/2014 11:37:00 AM	7/9/2014	7/16/2014
N012906-007B	11-10-059-Q3	Groundwater	7/9/2014 11:37:00 AM	7/9/2014	7/16/2014
N012906-008A	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/16/2014
N012906-008B	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/16/2014
N012906-009A	34-62-059-Q3	Groundwater	7/9/2014 1:49:00 PM	7/9/2014	7/16/2014
N012906-009B	34-62-059-Q3	Groundwater	7/9/2014 1:49:00 PM	7/9/2014	7/16/2014
N012906-010A	28-72-059-Q3	Groundwater	7/9/2014 2:27:00 PM	7/9/2014	7/16/2014
N012906-010B	28-72-059-Q3	Groundwater	7/9/2014 2:27:00 PM	7/9/2014	7/16/2014
N012906-011A	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/16/2014
N012906-011B	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/16/2014
N012906-012A	BGS-46-059-Q3	Groundwater	7/9/2014 3:53:00 PM	7/9/2014	7/16/2014
N012906-012B	BGS-46-059-Q3	Groundwater	7/9/2014 3:53:00 PM	7/9/2014	7/16/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-001

Client Sample ID: 27-16-059-Q3
Collection Date: 7/9/2014 8:05:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/11/2014 09:52 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/11/2014 12:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-002

Client Sample ID: 22-53-059-Q3
Collection Date: 7/9/2014 8:22:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	0.25	0.016	0.20		µg/L	1	7/11/2014 10:31 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 01:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-003

Client Sample ID: 22-23-059-Q3
Collection Date: 7/9/2014 8:54:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/11/2014 10:50 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/11/2014 01:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-004

Client Sample ID: 28-74-059-Q3
Collection Date: 7/9/2014 9:43:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/11/2014 11:28 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.0	0.030	1.0		µg/L	1	7/11/2014 01:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-005

Client Sample ID: 28-88-059-Q3
Collection Date: 7/9/2014 10:06:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/11/2014 11:47 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/11/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-006

Client Sample ID: 33-03-059-Q3
Collection Date: 7/9/2014 11:12:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 04:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 12:06 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-007

Client Sample ID: 11-10-059-Q3
Collection Date: 7/9/2014 11:37:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	3.8	0.016	0.20		µg/L	1	7/11/2014 12:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	7/11/2014 01:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-008

Client Sample ID: 34-58-059-Q3
Collection Date: 7/9/2014 12:11:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	0.22	0.016	0.20		µg/L	1	7/11/2014 12:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 01:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-009

Client Sample ID: 34-62-059-Q3
Collection Date: 7/9/2014 1:49:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	0.71	0.016	0.20		µg/L	1	7/11/2014 01:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/11/2014 01:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-010

Client Sample ID: 28-72-059-Q3
Collection Date: 7/9/2014 2:27:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 02:11 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 01:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 02:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-011

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/11/2014 01:59 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/11/2014 02:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 15-Jul-14

CLIENT: CH2M HILL
Lab Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012906-012

Client Sample ID: BGS-46-059-Q3
Collection Date: 7/9/2014 3:53:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/11/2014 02:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46023				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/11/2014 02:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94118	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: PBW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804365						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94118	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: LCSW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.201 0.060 0.2000 0 100 90 110

Sample ID N012920-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.021 0.060 0.01853 0 20

Sample ID N012920-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.208 0.060 0.2000 0.01853 94.9 90 110

Sample ID N012920-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804371						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.186 0.060 0.2000 0 92.9 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012920-002AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110	0.1859	8.70	20	

Sample ID N012906-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.04006	90.9	90	110				

Sample ID N012908-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0.01246	91.8	90	110				

Sample ID N012908-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01492	97.5	90	110				

Sample ID N012906-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804385						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.246	0.060	0.2000	0.03626	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012908-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804387						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01475	99.7	90	110				

Sample ID N012908-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01415	95.2	90	110				

Sample ID N012908-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02685	94.6	90	110				

Sample ID N012908-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804397						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.238	0.060	0.2000	0.03638	101	90	110				

Sample ID N012908-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804398						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0.01950	94.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012909-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804400						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110				

Sample ID N012909-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804402						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94093	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: PBW	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802724						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94093	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: LCSW	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802725						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.953	0.20	5.000	0	99.1	90	110				
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Sample ID N012906-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802727						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.144	0.20						1.154	0.870	20	
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Sample ID N012906-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802728						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.124	0.20	1.000	1.154	97.0	90	110				
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Sample ID N012906-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802729						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.122	0.20	1.000	1.154	96.7	90	110	2.124	0.113	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802731						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.271	0.20	1.000	0.2451	103	90	110				

Sample ID N012906-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802733						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.388	0.20	1.000	1.403	98.5	90	110				

Sample ID N012906-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802737						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.846	0.20	1.000	2.882	96.5	90	110				

Sample ID N012906-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802739						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.214	0.20	1.000	2.281	93.3	90	110				

Sample ID N012906-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802741						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0.02930	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802743						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.813	0.20	5.000	3.817	99.9	90	110
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Sample ID N012906-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802745						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.211	0.20	1.000	0.2184	99.3	90	110
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Sample ID N012906-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802749						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.674	0.20	1.000	0.7074	96.7	90	110
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Sample ID N012906-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.074	0.20	1.000	0.1108	96.3	90	110
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Sample ID N012906-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802753						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.528	0.20	1.000	1.544	98.5	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.156	0.20	1.000	1.174	98.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46023	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: PBW	Batch ID: 46023	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46023	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: LCSW	Batch ID: 46023	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803344						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.072 1.0 10.00 0 101 85 115

Sample ID N012906-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZZ	Batch ID: 46023	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803348						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.960 1.0 10.00 1.194 97.7 75 125

Sample ID N012906-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZZ	Batch ID: 46023	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.982 1.0 10.00 1.194 97.9 75 125 10.96 0.207 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Containers: 250 ml Poly (NH4)2SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C Preservatives: Filtered: Field Field Holding Time (days): 28 180		Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix					
27-16-059-Q3	7/9/14	0805	GW	X	X	NO12906-1 ↓ -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12	2	Johnson
22-53-059-Q3	7/9/14	0822	GW	X	X		2	Tomlin
22-23-059-Q3	7/9/14	0854	GW	X	X		2	Saini
28-74-059-Q3	7/9/14	0943	GW	X	X		2	Morris
28-88-059-Q3	7/9/14	1006	GW	X	X		2	Merritt
33-03-059-Q3	7/9/14	1112	GW	X	X		2	Coronado
11-10-059-Q3	7/9/14	1137	GW	X	X		2	Grimsley
34-58-059-Q3	7/9/14	1211	GW	X	X		2	Roberts
34-62-059-Q3	7/9/14	1349	GW	X	X		2	Eylicio
28-72-059-Q3	7/9/14	1427	GW	X	X		2	Gonzalez
36-41-059-Q3	7/9/14	1451	GW	X	X		2	Brown
BGS-46-059-Q3	7/9/14	1553	GW	X	X		2	Arrendondo
TOTAL NUMBER OF CONTAINERS							24	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Signatures Date/Time 7/9/14 1630 7/9/14 1640 7/9/14 1640 7/9/14 1640 7/9/14 1927		Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3.9°C Airbill No: 1P#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/9/2014 Workorder: N012906
 Rep sample Temp (Deg C): 3.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC *ACortez* 7/10/14

Reviewed By:

rog 07/14/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012906-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.036265 * 1 \\ &= 0.036265\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Nancy 7/15/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012906-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 3.8174 * 1 \\ &= 3.8174\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 3.8$$

Monney 7/15/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012906-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.19397713662391 * 1 * (25/25) \\ &= 1.19397713662391 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.2$$

Nancy 7/15/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012906
Test Method: EPA 6020
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46023

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012906-001B-DT 5X	Chromium	µg/L	1.223436901	NA	1.193977137	2.47%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012906
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012906-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46023	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.833	2.0	20.00	1.194	98.2	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 23, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012907

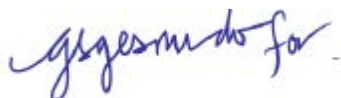
RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 09, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012907

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012907
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012907-001A	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/23/2014
N012907-001B	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/23/2014
N012907-001C	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/23/2014
N012907-001D	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/23/2014
N012907-001E	34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	7/9/2014	7/23/2014
N012907-002A	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/23/2014
N012907-002B	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/23/2014
N012907-002C	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/23/2014
N012907-002D	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/23/2014
N012907-002E	36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	7/9/2014	7/23/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-58-059-Q3
Lab Order: N012907	Collection Date: 7/9/2014 12:11:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012907-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate: 7/14/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	300	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1000	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46044	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: PBW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46044	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: LCSW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		999.000	10	1000	0	99.9	80	120			

Sample ID N012907-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: ZZZZZ	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804722						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		303.000	10					303.0	0	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-58-059-Q3
Lab Order: N012907	Collection Date: 7/9/2014 12:11:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012907-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	0.72	0.011	0.67	pCi/L	1	7/15/2014 05:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	29	0.011	0.67	pCi/L	1	7/15/2014 06:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46054	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: PBW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805270
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	ND	0.67			
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Sample ID LCS-46054	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: LCSW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805271
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	7.320	0.67	6.700	0	109 85 115
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Sample ID N012907-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805275
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	8.297	0.67	6.700	0.7250	113 75 125
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Sample ID N012907-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805276
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	8.459	0.67	6.700	0.7250	115 75 125 8.297 1.93 20
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Sample ID N012944-002A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805680
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	15.490	0.67	6.700	7.552	118 75 125
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Qualifiers:

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- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	34-58-059-Q3
Lab Order:	N012907	Collection Date:	7/9/2014 12:11:00 PM
Project:	PGE Hinkley, 492584.UR.AU	Matrix:	GROUNDWATER
Lab ID:	N012907-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082	PrepDate	Analyst: PS
Nitrate as N	0.16 0.0051	0.050 mg/L	1 7/10/2014 10:07 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140710A** QC Batch: **R94082** PrepDate: Analyst: **PS**
Nitrate as N 13 0.051 0.50 mg/L 10 7/10/2014 12:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94082_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	PBW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802314			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID	LCS-R94082_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	LCSW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802315			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.038 0.050 1.000 0 104 90 110

Sample ID	N012908-010C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802325			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.712 0.050 0.7200 1.12 20

Sample ID	N012908-010C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802326			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.715 0.050 1.000 0.7200 99.5 80 120

Sample ID	N012908-010C-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802327			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.720 0.050 1.000 0.7200 100 80 120 1.715 0.291 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-58-059-Q3
Lab Order: N012907	Collection Date: 7/9/2014 12:11:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012907-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 05:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140712A** QC Batch: **R94106** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/12/2014 05:45 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94106	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106						
Client ID: PBW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803869						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94106	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106						
Client ID: LCSW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803870						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.658 1.0 10.00 0 107 85 115

Sample ID N012927-001A-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106						
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803872						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 11.753 1.0 10.00 0.7782 110 75 125

Sample ID N012927-001A-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106						
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803873						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 11.880 1.0 10.00 0.7782 111 75 125 11.75 1.07 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-58-059-Q3
Lab Order: N012907	Collection Date: 7/9/2014 12:11:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012907-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate: 7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/11/2014 01:43 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/11/2014 01:48 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.002	0.020			

Sample ID LCS1-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804471
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.108	0.020	0.1000	0	108 85 115

Sample ID N012897-001B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804473
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.098	0.020	0.1000	0	98.3 75 125

Sample ID N012897-001B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804474
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.098	0.020	0.1000	0	98.3 75 125 0.09834 0.0525 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-58-059-Q3
Lab Order: N012907	Collection Date: 7/9/2014 12:11:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012907-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014	Analyst: CEI
Arsenic	9.8	0.027	0.10	µg/L	1	7/11/2014 07:14 PM
Manganese	52	0.026	0.50	µg/L	1	7/11/2014 07:14 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012907
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012907-002

Client Sample ID: 36-41-059-Q3
Collection Date: 7/9/2014 2:51:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Arsenic	7.8	0.027	0.10		µg/L	1	7/11/2014 07:20 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 07:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46025	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: PBW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.10									
Manganese	0.168	0.50									

Sample ID LCS-46025	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: LCSW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803478						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	10.496	0.10	10.00	0	105	85	115				
Manganese	103.436	0.50	100.0	0	103	85	115				

Sample ID N012908-025B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	27.624	0.10	10.00	17.33	103	75	125				
Manganese	96.460	0.50	100.0	0	96.5	75	125				

Sample ID N012908-025B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	27.373	0.10	10.00	17.33	100	75	125	27.62	0.914	20	
Manganese	96.864	0.50	100.0	0	96.9	75	125	96.46	0.418	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/9/2014 Workorder: N012907
 Rep sample Temp (Deg C): 3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist


- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/10/14

Reviewed By:

 07/14/14



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TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Spencer Doolittle

11-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012907-001E / 34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	32OZP	1		
N012907-002E / 36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012907 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross A/B by 900. CH2MHill samples. For questions, please contact Shawn Duffy at (53)941-9227.

		FedEx#: 7705 8804 6293		
Relinquished by: <u>ACortez</u> 7/11/14	Date/Time 1500	Received by: _____	Date/Time	
Relinquished by: _____		Received by: _____		

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012907-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0252-63.9949)*1000000}{100}$$

303 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 300 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/14/2014								TDS/CONDUCTIVITY
Date Finished: 7/15/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46044	100	63.5096	63.5096	0	1	0.00		
LCS-46044	100	64.1093	64.2092	999	1	999.00		
N012907-001C	100	63.9949	64.0252	303	1	303.00	427	0.71
N012907-001C-DUP	100	63.9758	64.0061	303	1	303.00	427	0.71
N012907-002C	100	64.2754	64.3796	1042	1	1042.00	1408	0.74
N012908-010D	100	62.9939	63.0279	340	1	340.00	530	0.64
N012908-011D	100	63.7802	63.8646	844	1	844.00	1200	0.70
N012908-015D	100	63.3738	63.4429	691	1	691.00	1011	0.68
N012908-016D	100	61.3605	61.4305	700	1	700.00	1005	0.70
N012908-017D	100	63.8031	63.8433	402	1	402.00	653	0.62
N012908-018C	100	62.4484	62.5012	528	1	528.00	933	0.57
N012908-019C	100	64.256	64.3167	607	1	607.00	935	0.65
N012909-001C	100	61.7318	61.7636	318	1	318.00	466	0.68
N012909-002C	100	60.6357	60.6656	299	1	299.00	419	0.71
N012909-003C	100	60.9842	61.0214	372	1	372.00	472	0.79

Jmer
7/15/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012907-002A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 43.0117475792441 * 1 * (25/25) * 0.67 \\ &= 28.8178708780936 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = \mathbf{29}$$

Money

7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012907
Test Method: EPA 200.
Analysis Date: 7/15/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46054

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012907-001A-DT 5X	Uranium	pCi/L	0.739540154	NA	0.724974072	2.01%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012907-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8	Analysis Date: 7/15/2014	SeqNo: 1805274							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	15.717	1.3	13.40	0.7250	112	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


A = mg/L, IC calculated concentration
DF = dilution factor

For **N012907-002B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.316 * 10 \\ &= 13.16 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 13$$

 7/22/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012907-001D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.17220] [1] - 0.04960$$

$$\text{TOC} = 0.12260$$

Reporting results in two significant figures,

$$\text{TOC} = 0.12 \text{ mg/L}$$

since result is <PQL,

$$\text{TOC} = \text{ND}$$

PS 7/18/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012907-001A**, the concentration in mg/L is calculated as follows:


$$\begin{aligned} \text{Iron, mg/L} &= 0.001666001567 * 1 * (25/25) \\ &= 0.001666001567 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.0017$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

 7/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012907
Test Method: EPA 6010
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46022

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012897-001B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012897-001B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94107						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1804472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4.827	0.040	5.000	0	96.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012907-001A**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 9.7608614226 * 1 * (25/25) \\ &= 9.7608614226 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 9.8$$



7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012907
Test Method: EPA 6020
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46025

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012908-025B-DT 5X	Arsenic	µg/L	17.19823652	PASS	17.33384226	0.78%	10
N012908-025B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012907
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012908-025B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	38.026	0.20	20.00	17.33	103	80	120				
Manganese	191.676	1.0	200.0	0	95.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 04, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012907
Pace Project No.: 30125092

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012907
Pace Project No.: 30125092

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125092001	N012907-001E / 34-58-059-Q3	Water	07/09/14 12:11	07/16/14 09:15
30125092002	N012907-002E / 36-41-059-Q3	Water	07/09/14 14:51	07/16/14 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012907
Pace Project No.: 30125092

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125092001	N012907-001E / 34-58-059-Q3	EPA 900.0	FCC	2
30125092002	N012907-002E / 36-41-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012907

Pace Project No.: 30125092

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 04, 2014

General Information:

2 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012907
Pace Project No.: 30125092

QC Batch: RADC/20635 Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 30125092001, 30125092002

METHOD BLANK: 763517 Matrix: Water
Associated Lab Samples: 30125092001, 30125092002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.450 ± 0.727 (1.61) C:NA T:NA	pCi/L	07/25/14 08:06	
Gross Beta	-0.362 ± 0.650 (1.73) C:NA T:NA	pCi/L	07/25/14 08:06	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.all-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

30125092

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Spencer Doolittle

11-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012907-001E / 34-58-059-Q3	Groundwater	7/9/2014 12:11:00 PM	32OZP	1		001
N012907-002E / 36-41-059-Q3	Groundwater	7/9/2014 2:51:00 PM	32OZP	1		002

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012907 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross AVB by 900. CH2M-Hill samples. For questions, please contact Shawn Duffy at (53)941-9227.

Date/Time		Date/Time	
Relinquished by: <i>Alorton</i>	7/11/14	Received by: <i>Scott Coville</i>	7/15/14
Relinquished by:		Received by:	
	1500		
		FedEx#: 7705 8804 6293	



Sample Condition Upon Receipt

30125092

APM

Client Name: ATL

Project #

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 770588046293

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [] Bubble Bags [] None [] Other: Foam

Thermometer Used [] Type of Ice: Wet Blue [X] None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: CRA 7/11/14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of inspection items and checkboxes. Items include Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, etc. Includes handwritten notes like 'PHLZ' and 'CRA'.

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review:

[Signature]

Date: 7/18/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/28/2014
Worklist: 20635
Matrix: Water

Method: EPA 900.0
SOP: PGHR-001
MB Sample ID: 763517



Sample Matrix Spike Control Assessment		Gross Alpha	Gross Beta
Analyte:		7/18/2014	7/18/2014
Sample Collection Date		30125585001	30125585001
Sample I.D.		30125585001MS	30125585001MS
Sample MS I.D.		13-048GA	13-047GB
Sample MSD I.D.		64.598	84.646
MS/MSD Decay Corrected Spike Conc. (pCi/L, g, F)		0.10	0.10
Spike Volume Used in MS (mL)		0.2004	0.2004
MS Aliquot (L, g, F)		32.236	42.240
MS Target Conc. (pCi/L, g, F)			
MSD Aliquot (L, g, F)			
MSD Target Conc. (pCi/L, g, F)		1.137	2.567
MS Spike uncertainty (calculated)			
MSD Spike uncertainty (calculated)		11.445	3.269
Sample Result:		3.463	1.414
Sample 1.96 Sigma Unc.		41.213	40.420
Sample Matrix Spike Result:		9.295	8.000
Sample MS 1.96 Sigma Unc.			
Sample Matrix Spike Duplicate Result:			
Sample MSD 1.96 Sigma Unc.		92.34%	87.95%
MS % Recovery:			
MSD % Recovery:		Pass	Pass
MS Assessment:			
MSD Assessment:			
MS/MSD Upper % Recovery Limits:		121.00%	130.00%
MS/MSD Lower % Recovery Limits:		69.00%	79.00%
Matrix Spike/Matrix Spike Duplicate Sample Assessment			

Method Blank Assessment		1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	0.4500	0.7270	1.6090	0.49800		
Gross Beta	-0.3620	0.6500	1.7290	0.58300		

Laboratory Control Sample Assessment		LCS	LCSD	LCS	LCSD	LCS	LCSD
Analyte:	Gross Alpha	7/25/14 8.05	7/25/14 8.05	7/25/14 8.05	7/25/14 8.05		
Count Date:	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB		
Spike I.D.:	64.598	84.605	84.605	84.605	84.605		
Spike Concentration (pCi/L)	0.050	0.050	0.050	0.050	0.050		
Volume Used (mL)	0.200	0.200	0.200	0.200	0.200		
Aliquot Volume (L, g, F)	16.140	21.138	21.138	21.138	21.138		
Target Conc. (pCi/L, g, F)	0.569	1.284	1.284	1.284	1.284		
1.96 Sigma Uncertainty (Calculated)	16.441	16.685	21.654	21.120	21.120		
Result (pCi/L, g, F)	3.912	4.047	4.553	4.475	4.475		
1.96 Sigma Unc	101.87%	103.39%	102.44%	99.92%	99.92%		
% Recovery:	Pass	Pass	Pass	Pass	Pass		
Assessment:	121.00%	130.00%	130.00%	130.00%	130.00%		
Upper % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%		
Lower % Recovery Limits	Duplicate Sample Assessment						
LCS/LCSD Y or N?	Y	Y	Y	Y	Y		
Analyte:	Gross Alpha	Gross Beta					
Sample I.D.:	LCS20635	LCS20635					
Duplicate Sample I.D.	LCS20635	LCS20635					
Sample Result (pCi/L, g, F)	16.4410	21.6540					
1.96 Sigma Unc	3.9120	4.5530					
Sample Duplicate Result (pCi/L, g, F)	16.6950	21.1200					
Duplicate Sample 1.96 Sigma Unc	4.0470	4.4750					
Either results below MDC?	NO	NO					
Relative Percent Difference	1.47%	2.50%					
Assessment:	Pass	Pass					
% RPD Limit:	34.00%	29.00%					

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

MBT 08-5-14

July 23, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612
TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012908

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 09, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012908

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6_Low Level:

Matrix Spike (MS) on QC sample N012908-024AMS is outside recovery criteria however, it passed in the regular level.. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 22-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012908
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012908-001A	MW-828-059-Q3	Water	7/9/2014 2:15:00 PM	7/9/2014	7/23/2014
N012908-002A	MW-136S1-059-Q3	Water	7/9/2014 8:51:00 AM	7/9/2014	7/23/2014
N012908-002B	MW-136S1-059-Q3	Water	7/9/2014 8:51:00 AM	7/9/2014	7/23/2014
N012908-003A	MW-136S2-059-Q3	Water	7/9/2014 9:30:00 AM	7/9/2014	7/23/2014
N012908-003B	MW-136S2-059-Q3	Water	7/9/2014 9:30:00 AM	7/9/2014	7/23/2014
N012908-004A	MW-137S1-059-Q3	Water	7/9/2014 11:11:00 AM	7/9/2014	7/23/2014
N012908-004B	MW-137S1-059-Q3	Water	7/9/2014 11:11:00 AM	7/9/2014	7/23/2014
N012908-005A	MW-137S2-059-Q3	Water	7/9/2014 11:45:00 AM	7/9/2014	7/23/2014
N012908-005B	MW-137S2-059-Q3	Water	7/9/2014 11:45:00 AM	7/9/2014	7/23/2014
N012908-006A	MW-137S3-059-Q3	Water	7/9/2014 10:27:00 AM	7/9/2014	7/23/2014
N012908-006B	MW-137S3-059-Q3	Water	7/9/2014 10:27:00 AM	7/9/2014	7/23/2014
N012908-007A	MW-139S1-059-Q3	Water	7/9/2014 1:59:00 PM	7/9/2014	7/23/2014
N012908-007B	MW-139S1-059-Q3	Water	7/9/2014 1:59:00 PM	7/9/2014	7/23/2014
N012908-008A	MW-139S2-059-Q3	Water	7/9/2014 1:17:00 PM	7/9/2014	7/23/2014
N012908-008B	MW-139S2-059-Q3	Water	7/9/2014 1:17:00 PM	7/9/2014	7/23/2014
N012908-009A	MW-829-059-Q3	Water	7/9/2014 3:25:00 PM	7/9/2014	7/23/2014
N012908-010A	MW-58-059-Q3	Water	7/9/2014 2:29:00 PM	7/9/2014	7/23/2014
N012908-010B	MW-58-059-Q3	Water	7/9/2014 2:29:00 PM	7/9/2014	7/23/2014
N012908-010C	MW-58-059-Q3	Water	7/9/2014 2:29:00 PM	7/9/2014	7/23/2014
N012908-010D	MW-58-059-Q3	Water	7/9/2014 2:29:00 PM	7/9/2014	7/23/2014
N012908-011A	MW-59-059-Q3	Water	7/9/2014 3:19:00 PM	7/9/2014	7/23/2014
N012908-011B	MW-59-059-Q3	Water	7/9/2014 3:19:00 PM	7/9/2014	7/23/2014
N012908-011C	MW-59-059-Q3	Water	7/9/2014 3:19:00 PM	7/9/2014	7/23/2014
N012908-011D	MW-59-059-Q3	Water	7/9/2014 3:19:00 PM	7/9/2014	7/23/2014
N012908-012A	MW-74D-059-Q3	Water	7/9/2014 12:16:00 PM	7/9/2014	7/23/2014
N012908-012B	MW-74D-059-Q3	Water	7/9/2014 12:16:00 PM	7/9/2014	7/23/2014
N012908-013A	MW-101D-059-Q3	Water	7/9/2014 2:02:00 PM	7/9/2014	7/23/2014
N012908-013B	MW-101D-059-Q3	Water	7/9/2014 2:02:00 PM	7/9/2014	7/23/2014
N012908-014A	MW-830-059-Q3	Water	7/9/2014 3:04:00 PM	7/9/2014	7/23/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012908
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012908-015A	EX-05-059-Q3	Water	7/9/2014 12:40:00 PM	7/9/2014	7/23/2014
N012908-015B	EX-05-059-Q3	Water	7/9/2014 12:40:00 PM	7/9/2014	7/23/2014
N012908-015C	EX-05-059-Q3	Water	7/9/2014 12:40:00 PM	7/9/2014	7/23/2014
N012908-015D	EX-05-059-Q3	Water	7/9/2014 12:40:00 PM	7/9/2014	7/23/2014
N012908-016A	MW-966-059-Q3	Water	7/9/2014 12:50:00 PM	7/9/2014	7/23/2014
N012908-016B	MW-966-059-Q3	Water	7/9/2014 12:50:00 PM	7/9/2014	7/23/2014
N012908-016C	MW-966-059-Q3	Water	7/9/2014 12:50:00 PM	7/9/2014	7/23/2014
N012908-016D	MW-966-059-Q3	Water	7/9/2014 12:50:00 PM	7/9/2014	7/23/2014
N012908-017A	EX-10-059-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012908-017B	EX-10-059-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012908-017C	EX-10-059-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012908-017D	EX-10-059-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012908-018A	MW-47-059-Q3	Water	7/9/2014 12:14:00 PM	7/9/2014	7/23/2014
N012908-018B	MW-47-059-Q3	Water	7/9/2014 12:14:00 PM	7/9/2014	7/23/2014
N012908-018C	MW-47-059-Q3	Water	7/9/2014 12:14:00 PM	7/9/2014	7/23/2014
N012908-019A	MW-973-059-Q3	Water	7/9/2014 12:24:00 PM	7/9/2014	7/23/2014
N012908-019B	MW-973-059-Q3	Water	7/9/2014 12:24:00 PM	7/9/2014	7/23/2014
N012908-019C	MW-973-059-Q3	Water	7/9/2014 12:24:00 PM	7/9/2014	7/23/2014
N012908-020A	MW-47A-059-Q3	Water	7/9/2014 11:18:00 AM	7/9/2014	7/23/2014
N012908-020B	MW-47A-059-Q3	Water	7/9/2014 11:18:00 AM	7/9/2014	7/23/2014
N012908-021A	MW-82S-059-Q3	Water	7/9/2014 10:31:00 AM	7/9/2014	7/23/2014
N012908-021B	MW-82S-059-Q3	Water	7/9/2014 10:31:00 AM	7/9/2014	7/23/2014
N012908-022A	MW-93C-059-Q3	Water	7/9/2014 1:41:00 PM	7/9/2014	7/23/2014
N012908-022B	MW-93C-059-Q3	Water	7/9/2014 1:41:00 PM	7/9/2014	7/23/2014
N012908-023A	MW-99C-059-Q3	Water	7/9/2014 2:54:00 PM	7/9/2014	7/23/2014
N012908-023B	MW-99C-059-Q3	Water	7/9/2014 2:54:00 PM	7/9/2014	7/23/2014
N012908-024A	MW-831-059-Q3	Water	7/9/2014 10:30:00 AM	7/9/2014	7/23/2014
N012908-025A	MW-200S1-059-Q3	Water	7/9/2014 2:12:00 PM	7/9/2014	7/23/2014
N012908-025B	MW-200S1-059-Q3	Water	7/9/2014 2:12:00 PM	7/9/2014	7/23/2014
N012908-026A	MW-995-059-Q3	Water	7/9/2014 2:22:00 PM	7/9/2014	7/23/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012908
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012908-026B	MW-995-059-Q3	Water	7/9/2014 2:22:00 PM	7/9/2014	7/23/2014
N012908-027A	MW-200S2-059-Q3	Water	7/9/2014 2:45:00 PM	7/9/2014	7/23/2014
N012908-027B	MW-200S2-059-Q3	Water	7/9/2014 2:45:00 PM	7/9/2014	7/23/2014
N012908-028A	MW-200S3-059-Q3	Water	7/9/2014 12:14:00 PM	7/9/2014	7/23/2014
N012908-028B	MW-200S3-059-Q3	Water	7/9/2014 12:14:00 PM	7/9/2014	7/23/2014
N012908-029A	MW-204D-059-Q3	Water	7/9/2014 10:19:00 AM	7/9/2014	7/23/2014
N012908-029B	MW-204D-059-Q3	Water	7/9/2014 10:19:00 AM	7/9/2014	7/23/2014
N012908-030A	MW-204S1-059-Q3	Water	7/9/2014 8:39:00 AM	7/9/2014	7/23/2014
N012908-030B	MW-204S1-059-Q3	Water	7/9/2014 8:39:00 AM	7/9/2014	7/23/2014
N012908-031A	MW-996-059-Q3	Water	7/9/2014 8:49:00 AM	7/9/2014	7/23/2014
N012908-031B	MW-996-059-Q3	Water	7/9/2014 8:49:00 AM	7/9/2014	7/23/2014
N012908-032A	MW-204S2-059-Q3	Water	7/9/2014 9:28:00 AM	7/9/2014	7/23/2014
N012908-032B	MW-204S2-059-Q3	Water	7/9/2014 9:28:00 AM	7/9/2014	7/23/2014



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-010

Client Sample ID: MW-58-059-Q3
Collection Date: 7/9/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044				PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	340	10	10		mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	840	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-05-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 12:40:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	690	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-966-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 12:50:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	700	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-10-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 9:07:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	400	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-47-059-Q3
Lab Order:	N012908	Collection Date:	7/9/2014 12:14:00 PM
Project:	PGE Hinkley, 492581.UR.SW.FW	Matrix:	WATER
Lab ID:	N012908-018		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	530	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-019

Client Sample ID: MW-973-059-Q3
Collection Date: 7/9/2014 12:24:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	610	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46044	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126
Client ID: PBW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804719
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera ND 10

Sample ID LCS-46044	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126
Client ID: LCSW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804720
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 999.000 10 1000 0 99.9 80 120

Sample ID N012907-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126
Client ID: ZZZZZ	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804722
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 303.000 10 303.0 0 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-001

Client Sample ID: MW-828-059-Q3
Collection Date: 7/9/2014 2:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 02:32 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 01:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-002

Client Sample ID: MW-136S1-059-Q3
Collection Date: 7/9/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/11/2014 10:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	7/11/2014 02:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-136S2-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 9:30:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 02:58 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 02:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 03:10 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-004

Client Sample ID: MW-137S1-059-Q3
Collection Date: 7/9/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	4.6	0.016	0.20		µg/L	1	7/11/2014 02:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	4.8	0.030	1.0		µg/L	1	7/11/2014 03:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-005

Client Sample ID: MW-137S2-059-Q3
Collection Date: 7/9/2014 11:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	4.6	0.016	0.20		µg/L	1	7/11/2014 03:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	4.5	0.030	1.0		µg/L	1	7/11/2014 03:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-006

Client Sample ID: MW-137S3-059-Q3
Collection Date: 7/9/2014 10:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/11/2014 03:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/11/2014 03:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-007

Client Sample ID: MW-139S1-059-Q3
Collection Date: 7/9/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	5.0	0.016	0.20		µg/L	1	7/11/2014 03:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	5.1	0.030	1.0		µg/L	1	7/11/2014 04:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-008

Client Sample ID: MW-139S2-059-Q3
Collection Date: 7/9/2014 1:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/11/2014 04:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/11/2014 04:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-009

Client Sample ID: MW-829-059-Q3
Collection Date: 7/9/2014 3:25:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 03:19 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 04:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-010

Client Sample ID: MW-58-059-Q3
Collection Date: 7/9/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	0.70	0.016	0.20		µg/L	1	7/11/2014 05:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 04:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/11/2014 05:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/11/2014 04:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-012

Client Sample ID: MW-74D-059-Q3
Collection Date: 7/9/2014 12:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	5.5	0.016	0.20		µg/L	1	7/11/2014 05:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	5.2	0.030	1.0		µg/L	1	7/11/2014 04:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-013

Client Sample ID: MW-101D-059-Q3
Collection Date: 7/9/2014 2:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	6.9	0.016	0.20		µg/L	1	7/11/2014 06:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	6.2	0.030	1.0		µg/L	1	7/11/2014 04:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-014

Client Sample ID: MW-830-059-Q3
Collection Date: 7/9/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 04:30 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 06:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-05-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 12:40:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/11/2014 07:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	7/11/2014 04:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-016

Client Sample ID: MW-966-059-Q3
Collection Date: 7/9/2014 12:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/11/2014 07:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	7/11/2014 04:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-017

Client Sample ID: EX-10-059-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	0.87	0.016	0.20		µg/L	1	7/11/2014 08:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/11/2014 04:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-018

Client Sample ID: MW-47-059-Q3
Collection Date: 7/9/2014 12:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/11/2014 09:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	7/11/2014 05:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-019

Client Sample ID: MW-973-059-Q3
Collection Date: 7/9/2014 12:24:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/11/2014 09:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/11/2014 05:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-020

Client Sample ID: MW-47A-059-Q3
Collection Date: 7/9/2014 11:18:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140711A	QC Batch: R94095				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/11/2014 09:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/11/2014 05:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-82S-059-Q3
Lab Order: N012908	Collection Date: 7/9/2014 10:31:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012908-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/11/2014 07:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/11/2014 05:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-022

Client Sample ID: MW-93C-059-Q3
Collection Date: 7/9/2014 1:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 04:51 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 08:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 05:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-023

Client Sample ID: MW-99C-059-Q3
Collection Date: 7/9/2014 2:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 05:12 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 08:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 05:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-024

Client Sample ID: MW-831-059-Q3
Collection Date: 7/9/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 05:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 09:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-025

Client Sample ID: MW-200S1-059-Q3
Collection Date: 7/9/2014 2:12:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/11/2014 08:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/11/2014 05:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-026

Client Sample ID: MW-995-059-Q3
Collection Date: 7/9/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/11/2014 08:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/11/2014 06:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-027

Client Sample ID: MW-200S2-059-Q3
Collection Date: 7/9/2014 2:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 06:18 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 09:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 06:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-028

Client Sample ID: MW-200S3-059-Q3
Collection Date: 7/9/2014 12:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	0.37	0.016	0.20		µg/L	1	7/11/2014 09:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 06:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-029

Client Sample ID: MW-204D-059-Q3
Collection Date: 7/9/2014 10:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	0.33	0.016	0.20		µg/L	1	7/11/2014 10:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 06:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-030

Client Sample ID: MW-204S1-059-Q3
Collection Date: 7/9/2014 8:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/11/2014 10:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	7/11/2014 06:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-031

Client Sample ID: MW-996-059-Q3
Collection Date: 7/9/2014 8:49:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	3.2	0.016	0.20		µg/L	1	7/11/2014 10:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	7/11/2014 07:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-032

Client Sample ID: MW-204S2-059-Q3
Collection Date: 7/9/2014 9:28:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	3.7	0.016	0.20		µg/L	1	7/11/2014 10:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	3.6	0.030	1.0		µg/L	1	7/11/2014 07:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94118	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: PBW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804365						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94118	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: LCSW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.201 0.060 0.2000 0 100 90 110

Sample ID N012920-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.021 0.060 0.01853 0 20

Sample ID N012920-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.208 0.060 0.2000 0.01853 94.9 90 110

Sample ID N012920-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804371						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.186 0.060 0.2000 0 92.9 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012920-002AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110	0.1859	8.70	20	

Sample ID N012906-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.04006	90.9	90	110				

Sample ID N012908-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0.01246	91.8	90	110				

Sample ID N012908-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01492	97.5	90	110				

Sample ID N012906-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804385						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.246	0.060	0.2000	0.03626	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012908-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804387						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01475	99.7	90	110				

Sample ID N012908-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01415	95.2	90	110				

Sample ID N012908-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02685	94.6	90	110				

Sample ID N012908-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0	113	90	110				S

Sample ID N012908-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804397						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.238	0.060	0.2000	0.03638	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012908-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804398						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.208	0.060	0.2000	0.01950	94.4	90	110
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Sample ID N012909-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804400						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110
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Sample ID N012909-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804402						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.209	0.060	0.2000	0	105	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94094	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: PBW	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802842							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID LCS-R94094	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: LCSW	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.864	0.20	5.000	0	97.3	90	110				

Sample ID N012909-011A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802847							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.433	0.20						2.419	0.565	20	

Sample ID N012909-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802850							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.410	0.20	1.000	2.419	99.1	90	110				

Sample ID N012909-011A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802851							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.395	0.20	1.000	2.419	97.6	90	110	3.410	0.458	20	

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802866						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.085	0.20	1.000	1.052	103	90	110				

Sample ID N012908-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802867						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0.03610	98.0	90	110				

Sample ID N012908-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802868						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0.05490	101	90	110				

Sample ID N012908-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802869						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0	101	90	110				

Sample ID N012908-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802870						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.019	0.20	1.000	2.004	101	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802873						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.002	0.20	1.000	2.011	99.1	90	110				

Sample ID N012908-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802874						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0.03870	97.9	90	110				

Sample ID N012908-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.353	0.20	1.000	0.3670	98.6	90	110				

Sample ID N012908-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.333	0.20	1.000	0.3343	99.8	90	110				

Sample ID N012908-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.144	0.20	1.000	3.118	103	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1802878							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.129	0.20	1.000	3.152	97.7	90	110				

Sample ID N012908-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1802879							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.645	0.20	1.000	3.707	93.8	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94095	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: PBW	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94095	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: LCSW	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.921	0.20	5.000	0	98.4	90	110				
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Sample ID N012908-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012908-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.024	0.20	1.000	0	102	90	110				
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Sample ID N012908-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.784	0.20	5.000	4.622	103	90	110				

Sample ID N012908-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.699	0.20	5.000	4.621	102	90	110				

Sample ID N012908-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803017						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.934	0.20	1.000	2.003	93.1	90	110				

Sample ID N012908-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.155	0.20	5.000	4.958	104	90	110				

Sample ID N012908-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803021						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.487	0.20	1.000	1.502	98.5	90	110				

Qualifiers:

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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N012908-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.656	0.20	1.000	0.7050	95.1	90	110				

Sample ID N012908-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803029						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.717	0.20	1.000	1.710	101	90	110				

Sample ID N012908-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.059	0.20	5.000	6.894	103	90	110				

Sample ID N012908-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803036						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803039						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.992	0.20	1.000	2.934	106	90	110				

Sample ID N012908-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803041						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.911	0.20	1.000	0.8701	104	90	110				

Sample ID N012908-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.359	0.20	1.000	2.336	102	90	110				

Sample ID N012908-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803047						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.490	0.20	1.000	2.559	93.1	90	110				

Sample ID N012908-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803049						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.374	0.20	1.000	2.292	108	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803051						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.333	0.20	1.000	3.405	92.8	90	110				

Sample ID N012908-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803052						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.488	0.20	1.000	3.405	108	90	110	4.333	3.51	20	

Sample ID N012908-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803053						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.515	0.20	5.000	5.460	101	90	110				

Sample ID N012908-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94095						
Client ID: ZZZZZZ	Batch ID: R94095	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1803056						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.992	0.20	1.000	3.064	92.9	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46024	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: PBW	Batch ID: 46024	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803365						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46024	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: LCSW	Batch ID: 46024	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.025 1.0 10.00 0 100 85 115

Sample ID N012908-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.972 1.0 10.00 3.351 96.2 75 125

Sample ID N012908-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803371						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.929 1.0 10.00 3.351 95.8 75 125 12.97 0.339 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46025	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: PBW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803398						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46025	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: LCSW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803399						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.847 1.0 10.00 0 98.5 85 115

Sample ID N012908-025B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803405						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.433 1.0 10.00 2.060 93.7 75 125

Sample ID N012908-025B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.452 1.0 10.00 2.060 93.9 75 125 11.43 0.168 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-010

Client Sample ID: MW-58-059-Q3
Collection Date: 7/9/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ALKALINITY, SPECIATED

SM 2320 B

RunID: WETCHEM_140710D	QC Batch: R94087					PrepDate	Analyst: LCC
Alkalinity, Bicarbonate (As CaCO3)	130	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Total (As CaCO3)	130	1.2	5.0		mg/L	1	7/10/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ALKALINITY, SPECIATED

SM 2320 B

RunID: WETCHEM_140710D	QC Batch: R94087				PrepDate	Analyst: LCC
Alkalinity, Bicarbonate (As CaCO3)	150	1.2	5.0	mg/L	1	7/10/2014
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0	mg/L	1	7/10/2014
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0	mg/L	1	7/10/2014
Alkalinity, Total (As CaCO3)	150	1.2	5.0	mg/L	1	7/10/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-017

Client Sample ID: EX-10-059-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ALKALINITY, SPECIATED

SM 2320 B

RunID: WETCHEM_140710D	QC Batch: R94087					PrepDate	Analyst: LCC
Alkalinity, Bicarbonate (As CaCO3)	130	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Carbonate (As CaCO3)	ND	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Hydroxide (As CaCO3)	ND	1.2	5.0		mg/L	1	7/10/2014
Alkalinity, Total (As CaCO3)	130	1.2	5.0		mg/L	1	7/10/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID	LCS-R94087	SampType:	LCS	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94087			
Client ID:	LCSW	Batch ID:	R94087	TestNo:	SM 2320 B			Analysis Date:	7/10/2014	SeqNo:	1802440			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		98.174		5.0	100.0	0		98.2	85	115				
Alkalinity, Total (As CaCO3)		102.740		5.0	100.0	0		103	85	115				

Sample ID	MB-R94087	SampType:	MBLK	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94087			
Client ID:	PBW	Batch ID:	R94087	TestNo:	SM 2320 B			Analysis Date:	7/10/2014	SeqNo:	1802441			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		ND		5.0										
Alkalinity, Carbonate (As CaCO3)		ND		5.0										
Alkalinity, Hydroxide (As CaCO3)		ND		5.0										
Alkalinity, Total (As CaCO3)		ND		5.0										

Sample ID	N012908-010D-DUP	SampType:	DUP	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94087			
Client ID:	ZZZZZ	Batch ID:	R94087	TestNo:	SM 2320 B			Analysis Date:	7/10/2014	SeqNo:	1802443			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		134.703		5.0							134.7	0	30	
Alkalinity, Carbonate (As CaCO3)		ND		5.0							0	0	30	
Alkalinity, Hydroxide (As CaCO3)		ND		5.0							0	0	30	
Alkalinity, Total (As CaCO3)		134.703		5.0							134.7	0	30	

Sample ID	N012908-011D-MS	SampType:	MS	TestCode:	2320_W_SP	Units:	mg/L	Prep Date:		RunNo:	94087			
Client ID:	ZZZZZ	Batch ID:	R94087	TestNo:	SM 2320 B			Analysis Date:	7/10/2014	SeqNo:	1802445			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)		253.425		5.0	100.0	153.4		100	75	125				
Alkalinity, Total (As CaCO3)		253.425		5.0	100.0	153.4		100	75	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID N012908-011D-MSD	SampType: MSD	TestCode: 2320_W_SP	Units: mg/L	Prep Date:	RunNo: 94087						
Client ID: ZZZZZZ	Batch ID: R94087	TestNo: SM 2320 B		Analysis Date: 7/10/2014	SeqNo: 1802446						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	253.425	5.0	100.0	153.4	100	75	125	253.4	0	20	
Alkalinity, Total (As CaCO3)	253.425	5.0	100.0	153.4	100	75	125	253.4	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-010

Client Sample ID: MW-58-059-Q3
Collection Date: 7/9/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Chloride	43	0.25	5.0		mg/L	10	7/10/2014 02:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	64	0.33	5.0		mg/L	10	7/10/2014 02:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	0.72	0.0051	0.050		mg/L	1	7/10/2014 09:36 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Chloride	180	1.2	25		mg/L	50	7/10/2014 02:07 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	130	0.66	10		mg/L	20	7/10/2014 11:23 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	18	0.10	1.0		mg/L	20	7/10/2014 11:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-015

Client Sample ID: EX-05-059-Q3
Collection Date: 7/9/2014 12:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/10/2014 01:04 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	7.2	0.026	0.25		mg/L	5	7/10/2014 10:32 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-016

Client Sample ID: MW-966-059-Q3
Collection Date: 7/9/2014 12:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/10/2014 01:42 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	7.3	0.026	0.25		mg/L	5	7/10/2014 12:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-017

Client Sample ID: EX-10-059-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Chloride	72	0.25	5.0		mg/L	10	7/10/2014 02:32 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	73	0.33	5.0		mg/L	10	7/10/2014 02:32 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	2.7	0.010	0.10		mg/L	2	7/10/2014 08:57 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94082_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	PBW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802340			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		ND		0.50										

Sample ID	LCS-R94082_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	LCSW	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802341			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		2.509		0.50	2.500	0		100	90	110				

Sample ID	N012908-010C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802352			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		44.090		5.0							43.46	1.44	20	

Sample ID	N012908-010C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802353			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		69.930		5.0	25.00	43.46		106	80	120				

Sample ID	N012908-010C-MSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94082			
Client ID:	ZZZZZ	Batch ID:	R94082	TestNo:	EPA 300.0			Analysis Date:	7/10/2014	SeqNo:	1802354			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		69.940		5.0	25.00	43.46		106	80	120	69.93	0.0143	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94082_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: PBW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94082_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: LCSW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 5.004 0.50 5.000 0 100 90 110

Sample ID N012908-010C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 64.300 5.0 64.42 0.186 20

Sample ID N012908-010C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802377						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 113.710 5.0 50.00 64.42 98.6 80 120

Sample ID N012908-010C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 113.260 5.0 50.00 64.42 97.7 80 120 113.7 0.397 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94082_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: PBW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID LCS-R94082_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: LCSW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.038 0.050 1.000 0 104 90 110

Sample ID N012908-010C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.712 0.050 0.7200 1.12 20

Sample ID N012908-010C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802326						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.715 0.050 1.000 0.7200 99.5 80 120

Sample ID N012908-010C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94082						
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.720 0.050 1.000 0.7200 100 80 120 1.715 0.291 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL

Client Sample ID: MW-58-059-Q3

Lab Order: N012908

Collection Date: 7/9/2014 2:29:00 PM

Project: PGE Hinkley, 492581.UR.SW.FW

Matrix: WATER

Lab ID: N012908-010

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140711A**

QC Batch: **46022**

PrepDate

7/11/2014

Analyst: **CEI**

Calcium	41	0.058	0.50		mg/L	1	7/11/2014 01:53 PM
Iron	ND	0.0013	0.020		mg/L	1	7/11/2014 01:53 PM
Magnesium	6.8	0.011	0.10		mg/L	1	7/11/2014 01:53 PM
Potassium	2.0	0.084	0.50		mg/L	1	7/15/2014 11:33 AM
Sodium	63	0.19	2.5		mg/L	5	7/15/2014 10:35 AM

Qualifiers:

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out

E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

RunID: ICP2_140711A	EPA 3010A		EPA 6010B		PrepDate	7/11/2014	Analyst: CEI
	QC Batch: 46022						
Calcium	110	0.058	0.50		mg/L	1	7/11/2014 01:57 PM
Iron	ND	0.0013	0.020		mg/L	1	7/11/2014 01:57 PM
Magnesium	20	0.011	0.10		mg/L	1	7/11/2014 01:57 PM
Potassium	4.2	0.084	0.50		mg/L	1	7/15/2014 11:37 AM
Sodium	110	0.19	2.5		mg/L	5	7/15/2014 10:38 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL

Client Sample ID: EX-10-059-Q3

Lab Order: N012908

Collection Date: 7/9/2014 9:07:00 AM

Project: PGE Hinkley, 492581.UR.SW.FW

Matrix: WATER

Lab ID: N012908-017

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140711A**

QC Batch: **46022**

PrepDate

7/11/2014

Analyst: **CEI**

Calcium	50	0.058	0.50		mg/L	1	7/11/2014 02:03 PM
Iron	ND	0.0013	0.020		mg/L	1	7/11/2014 02:03 PM
Magnesium	8.7	0.011	0.10		mg/L	1	7/11/2014 02:03 PM
Potassium	2.3	0.084	0.50		mg/L	1	7/15/2014 11:49 AM
Sodium	72	0.19	2.5		mg/L	5	7/15/2014 10:42 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out

E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107						
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804466						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	ND	0.50									
Iron	0.002	0.020									
Magnesium	ND	0.10									

Sample ID LCS1-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107						
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804471						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	10.839	0.50	10.00	0	108	85	115				
Iron	0.108	0.020	0.1000	0	108	85	115				
Magnesium	10.983	0.10	10.00	0	110	85	115				

Sample ID N012897-001B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	98.887	0.50	10.00	90.46	84.3	75	125				
Iron	0.098	0.020	0.1000	0	98.3	75	125				
Magnesium	26.216	0.10	10.00	16.58	96.3	75	125				

Sample ID N012897-001B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804474						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	101.602	0.50	10.00	90.46	111	75	125	98.89	2.71	20	
Iron	0.098	0.020	0.1000	0	98.3	75	125	0.09834	0.0525	20	
Magnesium	26.616	0.10	10.00	16.58	100	75	125	26.22	1.51	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID LCS2-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	20.315	0.50	20.00	0	102	85	115				
Sodium	20.381	0.50	20.00	0	102	85	115				

Sample ID N012896-015B-MS2	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.519	0.50	20.00	2.688	104	75	125				

Sample ID N012896-015B-MS2	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	83.151	2.5	25.00	63.10	80.2	75	125				

Sample ID N012896-015B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.302	0.50	25.00	2.688	82.5	75	125	23.52	0.927	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID N012896-015B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94147						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	83.713	2.5	20.00	63.10	103	75	125	83.15	0.673	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-010

Client Sample ID: MW-58-059-Q3
Collection Date: 7/9/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024			PrepDate	7/11/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/11/2014 04:12 PM
Manganese	ND	0.026	0.50	µg/L	1	7/11/2014 04:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-011

Client Sample ID: MW-59-059-Q3
Collection Date: 7/9/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024			PrepDate	7/11/2014	Analyst: CEI	
Arsenic	1.4	0.027	0.10		µg/L	1	7/11/2014 04:18 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 04:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012908-017

Client Sample ID: EX-10-059-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46024			PrepDate	7/11/2014	Analyst: CEI
Arsenic	0.97	0.027	0.10	µg/L	1	7/11/2014 04:56 PM
Manganese	4.8	0.026	0.50	µg/L	1	7/11/2014 04:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46024	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: PBW	Batch ID: 46024	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803444
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	0.056	0.50			

Sample ID LCS-46024	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: LCSW	Batch ID: 46024	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803445
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.634	0.10	10.00	0	106 85 115
Manganese	102.096	0.50	100.0	0	102 85 115

Sample ID N012908-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803449
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	13.713	0.10	10.00	3.179	105 75 125
Manganese	99.735	0.50	100.0	2.062	97.7 75 125

Sample ID N012908-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803450
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	13.771	0.10	10.00	3.179	106 75 125 13.71 0.419 20
Manganese	100.842	0.50	100.0	2.062	98.8 75 125 99.74 1.10 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: Preservatives: Filtered: Holding Time (days):	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C Field 28	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C NA 7	1000ml Poly 4°C NA 7	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Ca,Fe,K,Mg,Na Metals Dissolved (6020AFF) FF As,Cr,Mn Metals Dissolved (6020AFF) FF Cr Metals Dissolved (6020AFF) FF Anions (E300.0) FF NO3N,SO4,Cl Anions (E300.0) FF NO3N,SO4 TDS (SM2540C) Alkalinity (SM2320B)	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	X											
MW-828-059-Q3	7/9/2014	1415	Water	X											NO12908-1
MW-136S1-059-Q3	7/9/2014	0851	Water	X			X								-2
MW-136S2-059-Q3	7/9/2014	0930	Water	X			X								-3
MW-137S1-059-Q3	7/9/2014	1111	Water	X			X								-4
MW-137S2-059-Q3	7/9/2014	1145	Water	X			X								-5
MW-137S3-059-Q3	7/9/2014	1027	Water	X			X								-6
MW-139S1-059-Q3	7/9/2014	1359	Water	X			X								-7
MW-139S2-059-Q3	7/9/2014	1317	Water	X			X								-8
MW-829-059-Q3	7/9/2014	1525	Water	X											-9
MW-58-059-Q3	7/9/2014	1429	Water	X	X	X			X	X	X				-10
MW-59-059-Q3	7/9/2014	1519	Water	X	X	X			X	X	X				-11
MW-74D-059-Q3	7/9/2014	1216	Water	X			X								-12
MW-75D-059-Q3	7/9/2014		Water	X			X								2
MW-101D-059-Q3	7/9/2014	1402	Water	X			X								-13
MW-830-059-Q3	7/9/2014	1504	Water	X											-14
EX-05-059-Q3	7/9/2014	1240	Water	X			X	X		X					-15

Approved by <i>K. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/9/14 1640 7/9/14 1641 7/9/14 1641 7/9/14 1641 7/9/14 1641 7/9/14 1627	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 2, 9, 12, 14 Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	Number of Containers	COMMENTS
Preservatives:				(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C			
Filtered:				Field	Field	Field	Field	Field	Field	NA	NA			
Holding Time (days):				28	180	180	180	2	2	7	7			
SAMPLE ID				DATE	TIME	Matrix	Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Ca,Fe,K,Mg,Na	Metals Dissolved (6020AFF) FF Cr	Metals Dissolved (6020AFF) FF Cr	Anions (E300.0) FF NO3N,SO4,Cl	Anions (E300.0) FF NO3N,SO4	TDS (SM2540C)	Alkalinity (SM2320B)
MW-966-059-Q3	7/9/2014	1250	Water	X			X	X		X		4	JD	
EX-10-059-Q3	7/9/2014	0907	Water	X	X	X			X	X	X	4	JD	
MW-47-059-Q3	7/9/2014	1214	Water	X			X			X		3	JD	
MW-973-059-Q3	7/9/2014	1224	Water	X			X			X		3	JD	
MW-47A-059-Q3	7/9/2014	1118	Water	X			X					2	JD	
MW-82S-059-Q3	7/9/2014	1031	Water	X			X					2	JD	
MW-93C-059-Q3	7/9/2014	1341	Water	X			X					2	JD	
MW-99C-059-Q3	7/9/2014	1454	Water	X			X					2	JD	
MW-831-059-Q3	7/9/2014	1030	Water	X								1	TH	
MW-200S1-059-Q3	7/9/2014	1412	Water	X			X					2	TH	
MW-995-059-Q3	7/9/2014	1422	Water	X			X					2	TH	
MW-200S2-059-Q3	7/9/2014	1445	Water	X			X					2	TH	
MW-200S3-059-Q3	7/9/2014	1214	Water	X			X					2	TH	
MW-204D-059-Q3	7/9/2014	1019	Water	X			X					2	TH	
MW-204S1-059-Q3	7/9/2014	0839	Water	X			X					2	TH	
MW-996-059-Q3	7/9/2014	0849	Water	X			X					2	TH	

N012908-16

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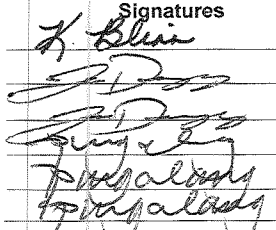
-29

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Approved by	<i>K. Blum</i>	Date/Time	7/9/14 1640	Shipping Details	ATTN:	Special Instructions:
Sampled by	<i>[Signature]</i>	Date/Time	7/9/14 1641	Method of Shipment:		Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Relinquished by	<i>[Signature]</i>	Date/Time	7/9/14 1641	On Ice: <input checked="" type="checkbox"/> yes / no <i>3.2 U 5.5 U</i>		
Received by	<i>[Signature]</i>	Date/Time	7/9/14 1649	Airbill No: <i>1842</i>		
Relinquished by	<i>[Signature]</i>	Date/Time	7/9/14	Lab Name: Advanced Technology Laboratories		
Received by	<i>[Signature]</i>	Date/Time	7/9/14 1927	Lab Phone: (702) 307-2659		

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C NA 7	1000ml Poly 4°C NA 7	Number of Containers COMMENTS	
SAMPLE ID MW-204S2-059-Q3	DATE 7/9/2014	TIME 0928	Matrix Water	X	X	X	X	X	X	X	NO12908-32		2
TOTAL NUMBER OF CONTAINERS										72			

Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures 	Date/Time 7/9/14 1640 7/9/14 1641 7/9/14 1641 7/9/14 1641 7/9/14 1927 7/9/14 1927	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/9/2014 Workorder: N012908
 Rep sample Temp (Deg C): 2.9/3.2/3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Sample MW-139S2-059-Q3 was received at pH 5, acid added to pH <2.

Checklist Completed B AC *ACortez* 7/10/14

Reviewed By: *rog* 07/14/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012908-010D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.0279-62.9939)*1000000}{100}$$

340 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 340 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/14/2014								TDS/CONDUCTIVITY
Date Finished: 7/15/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46044	100	63.5096	63.5096	0	1	0.00		
LCS-46044	100	64.1093	64.2092	999	1	999.00		
N012907-001C	100	63.9949	64.0252	303	1	303.00	427	0.71
N012907-001C-DUP	100	63.9758	64.0061	303	1	303.00	427	0.71
N012907-002C	100	64.2754	64.3796	1042	1	1042.00	1408	0.74
N012908-010D	100	62.9939	63.0279	340	1	340.00	530	0.64
N012908-011D	100	63.7802	63.8646	844	1	844.00	1200	0.70
N012908-015D	100	63.3738	63.4429	691	1	691.00	1011	0.68
N012908-016D	100	61.3605	61.4305	700	1	700.00	1005	0.70
N012908-017D	100	63.8031	63.8433	402	1	402.00	653	0.62
N012908-018C	100	62.4484	62.5012	528	1	528.00	933	0.57
N012908-019C	100	64.256	64.3167	607	1	607.00	935	0.65
N012909-001C	100	61.7318	61.7636	318	1	318.00	466	0.68
N012909-002C	100	60.6357	60.6656	299	1	299.00	419	0.71
N012909-003C	100	60.9842	61.0214	372	1	372.00	472	0.79

Jmer
7/15/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012908-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.012457 * 1 \\ &= 0.012457\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/22/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012908-013A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 6.8941 * 1 \\ &= 6.8941\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 6.9$$

 7/22/2014

Sample ID: **N012908-010D @ pH 7.55**

A. Standardization of Sulfuric Acid (titrant):

$$\text{Normality of acid} = (A)(B)/(53.00)(C)$$

Where:

A, grams weighed for Na₂CO₃ solution (Na₂CO₃ Standardization Solution)
B, mL Na₂CO₃ solution taken for titration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

Na₂CO₃ Standardization Solution, ACS Grade (1.00 ml = 2500ug as CaCO₃):
Dissolve 2.650 grams of Na₂CO₃ in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock NaHCO₃, ACS Grade (1.00 ml = 5000 ug as CaCO₃):
Dissolve 0.8398 grams of NaHCO₃ in distilled water and dilute to 1 liter.

Therefore,

$$\begin{aligned} \text{Normality of Acid} &= (2.65\text{g/L}) (5\text{mL}) / (53.00) (10.95\text{mL}) \\ &= \mathbf{0.02283\ N} \end{aligned}$$

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

$$\text{Total Alkalinity (as CaCO}_3\text{), mg/L} = M_{\text{vol.}} \cdot N \text{ H}_2\text{SO}_4 \cdot \text{DF} \cdot 1000$$

Where:

M_{vol.}, volume titrant used to reach pH 4.5, ml
N, Normality of H₂SO₄
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

$$\begin{aligned} \text{Total Alkalinity (as CaCO}_3\text{), mg/L} &= (5.90) (0.02283\ \text{N}) (1) \cdot 1000 \\ &= 134.69\ \mathbf{mg/L} \end{aligned}$$

Reporting results in two significant figures,

$$= 130.00\ \mathbf{mg/L}\ \text{as CaCO}_3$$


7/10/2014

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

$$\begin{aligned} \text{P alkalinity, mg/L as CaCO}_3 &= P_{\text{vol.}} \cdot N \text{ H}_2\text{SO}_4 \cdot \text{DF} \cdot 1000 \\ &= (0) (0.02283 \text{ N}) (1) \cdot 1000 \\ &= \mathbf{0} \end{aligned}$$

Total Alkalinity

$$\begin{aligned} \text{T alkalinity, mg/L as CaCO}_3 &= M_{\text{vol.}} \cdot N \text{ H}_2\text{SO}_4 \cdot \text{DF} \cdot 1000 \\ &= (5.90 \text{ mL}) (0.02283) (1) \cdot 1000 \\ &= \mathbf{134.69 \text{ mg/L as CaCO}_3} \end{aligned}$$

Where:

- $P_{\text{vol.}}$ - volume titrant used to reach pH 8.3, ml
- $M_{\text{vol.}}$ - volume titrant used to reach pH 4.5, ml
- N - Normality of H_2SO_4
- DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3 , HCO_3 alkalinities as CaCO_3 will be calculated as follows:

Result of Titration	OH Alkalinity as CaCO_3	CO_3 Alkalinity as CaCO_3	HCO_3 Alkalinity as CaCO_3
$P = 0$	0	0	T
$P < \frac{1}{2} T$	0	2P	$T - 2P$
$P = \frac{1}{2} T$	0	2P	0
$P > \frac{1}{2} T$	$2P - T$	$2(T - P)$	0
$P = T$	T	0	0

Therefore,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{130.00 \text{ mg/L}}$$

Reporting results in two significant figures,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{130.00 \text{ mg/L}}$$

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


A = mg/L, IC calculated concentration
DF = dilution factor

For **N012908-011C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.905 * 20 \\ &= 18.1 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 18$$

 7/22/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Water

FORMULA:

Calculate the Sodium concentration, in mg/L, in the original sample as follows:

$$\text{Sodium, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012908-017B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Sodium, mg/L} &= 14.41111242 * 5 * (25/25) \\ &= 72.0555621 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Sodium, mg/L} = 72$$

 7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012908
 Test Method: EPA 6010
 Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
 Batch No.: 46022

Instrument ID: ICP-02
 Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Dilution test failed to Mg. However, PS @2X passed criteria.

Dilution test failed to Ca.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012897-001B-DT 5X	Calcium	mg/L	114.123659	FAILED	90.45510776	26.17%	10
N012897-001B-DT 5X	Iron	mg/L	0	NA	0		10
N012897-001B-DT 5X	Magnesium	mg/L	18.31054026	FAILED	16.5820106	10.42%	10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012908
Test Method: EPA 6010
Analysis Date: 07/15/14

Dilution Test Summary

Matrix: Water
Batch No.: 46022

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Dilution Test is not applicable for K. The calculated concentration was < 25X the RL. Dilution Test failed for Na.
However the PS @2X and @5X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012896-015B-DT 5X	Potassium	mg/L	2.44267759	NA	2.687889	9.12%	10
N012896-015B-DT 25X	Sodium	mg/L	69.8664488	FAIL	63.099525	10.72%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012897-001B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94107						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1804472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	103.540	1.0	5.000	90.46	262	80	120				S
Iron	4.827	0.040	5.000	0	96.5	80	120				
Magnesium	22.239	0.20	5.000	16.58	113	80	120				

Sample ID: N012896-015B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94147						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/15/2014	SeqNo: 1805641							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Potassium	43.235	1.0	40.00	2.688	101	80	120				
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Sample ID: N012896-015B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94147						
Client ID: ZZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/15/2014	SeqNo: 1805642							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sodium	162.735	2.5	100.0	63.10	99.6	80	120				
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Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012908-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.35078077771271 * 1 * (25/25) \\ &= 3.35078077771271 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.4$$

Nancy 7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012908
Test Method: EPA 6020
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46024

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012908-002B-DT 5X	Chromium	µg/L	3.477601081	NA	3.350780778	3.78%	10
N012908-002B-DT 5X	Arsenic	µg/L	3.149335249	PASS	3.1787486	0.93%	10
N012908-002B-DT 5X	Manganese	µg/L	2.329890633	NA	2.061784243	13.00%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012908
Test Method: EPA 6020
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46025

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012908-025B-DT 5X	Chromium	µg/L	2.144412752	NA	2.059592017	4.12%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012908-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803369							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.618	2.0	20.00	3.351	96.3	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012908-025B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803404						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.806	2.0	20.00	2.060	93.7	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

CLIENT: CH2M HILL
Work Order: N012908
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012908-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46024	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803448						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.315	0.20	20.00	3.179	101	80	120				
Manganese	194.917	1.0	200.0	2.062	96.4	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 23, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012909

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 09, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012909

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protem, Missouri.



ASSET Laboratories

Date: 23-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012909
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012909-001A	MW-37-059b-Q3	Water	7/9/2014 3:33:00 PM	7/9/2014	7/23/2014
N012909-001B	MW-37-059b-Q3	Water	7/9/2014 3:33:00 PM	7/9/2014	7/23/2014
N012909-001C	MW-37-059b-Q3	Water	7/9/2014 3:33:00 PM	7/9/2014	7/23/2014
N012909-002A	MW-155D-059b-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012909-002B	MW-155D-059b-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012909-002C	MW-155D-059b-Q3	Water	7/9/2014 9:07:00 AM	7/9/2014	7/23/2014
N012909-003A	MW-155S-059b-Q3	Water	7/9/2014 10:43:00 AM	7/9/2014	7/23/2014
N012909-003B	MW-155S-059b-Q3	Water	7/9/2014 10:43:00 AM	7/9/2014	7/23/2014
N012909-003C	MW-155S-059b-Q3	Water	7/9/2014 10:43:00 AM	7/9/2014	7/23/2014
N012909-004A	MW-743-059b-Q3	Water	7/9/2014 1:10:00 PM	7/9/2014	7/23/2014
N012909-005A	PT1-MW-01-059b-Q3	Water	7/9/2014 9:35:00 AM	7/9/2014	7/23/2014
N012909-005B	PT1-MW-01-059b-Q3	Water	7/9/2014 9:35:00 AM	7/9/2014	7/23/2014
N012909-005C	PT1-MW-01-059b-Q3	Water	7/9/2014 9:35:00 AM	7/9/2014	7/23/2014
N012909-005D	PT1-MW-01-059b-Q3	Water	7/9/2014 9:35:00 AM	7/9/2014	7/23/2014
N012909-006A	PT1-MW-04-059b-Q3	Water	7/9/2014 8:41:00 AM	7/9/2014	7/23/2014
N012909-006B	PT1-MW-04-059b-Q3	Water	7/9/2014 8:41:00 AM	7/9/2014	7/23/2014
N012909-006C	PT1-MW-04-059b-Q3	Water	7/9/2014 8:41:00 AM	7/9/2014	7/23/2014
N012909-006D	PT1-MW-04-059b-Q3	Water	7/9/2014 8:41:00 AM	7/9/2014	7/23/2014
N012909-007A	SC-MW-32D-059b-Q3	Water	7/9/2014 10:33:00 AM	7/9/2014	7/23/2014
N012909-007B	SC-MW-32D-059b-Q3	Water	7/9/2014 10:33:00 AM	7/9/2014	7/23/2014
N012909-007C	SC-MW-32D-059b-Q3	Water	7/9/2014 10:33:00 AM	7/9/2014	7/23/2014
N012909-008A	SC-MW-32S-059b-Q3	Water	7/9/2014 11:09:00 AM	7/9/2014	7/23/2014
N012909-008B	SC-MW-32S-059b-Q3	Water	7/9/2014 11:09:00 AM	7/9/2014	7/23/2014
N012909-008C	SC-MW-32S-059b-Q3	Water	7/9/2014 11:09:00 AM	7/9/2014	7/23/2014
N012909-009A	MW-934-059b-Q3	Water	7/9/2014 12:06:00 PM	7/9/2014	7/23/2014
N012909-009B	MW-934-059b-Q3	Water	7/9/2014 12:06:00 PM	7/9/2014	7/23/2014
N012909-010A	SC-MW-38D-059b-Q3	Water	7/9/2014 12:01:00 PM	7/9/2014	7/23/2014
N012909-010B	SC-MW-38D-059b-Q3	Water	7/9/2014 12:01:00 PM	7/9/2014	7/23/2014
N012909-011A	SC-MW-38S-059b-Q3	Water	7/9/2014 12:55:00 PM	7/9/2014	7/23/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012909
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012909-011B	SC-MW-38S-059b-Q3	Water	7/9/2014 12:55:00 PM	7/9/2014	7/23/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-001

Client Sample ID: MW-37-059b-Q3
Collection Date: 7/9/2014 3:33:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	320	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-003

Client Sample ID: MW-155S-059b-Q3
Collection Date: 7/9/2014 10:43:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140714C	QC Batch: 46044			PrepDate	7/14/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	370	10	10	mg/L	1	7/14/2014 08:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46044	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: PBW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46044	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: LCSW	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		999.000	10	1000	0	99.9	80	120			

Sample ID N012907-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94126						
Client ID: ZZZZZ	Batch ID: 46044	TestNo: SM2540C		Analysis Date: 7/14/2014	SeqNo: 1804722						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		303.000	10					303.0	0	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-001

Client Sample ID: MW-37-059b-Q3
Collection Date: 7/9/2014 3:33:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	0.98	0.016	0.20		µg/L	1	7/11/2014 02:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/11/2014 07:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-002

Client Sample ID: MW-155D-059b-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 06:49 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 02:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 07:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-003

Client Sample ID: MW-155S-059b-Q3
Collection Date: 7/9/2014 10:43:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	0.24	0.016	0.20		µg/L	1	7/11/2014 03:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 07:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-004

Client Sample ID: MW-743-059b-Q3
Collection Date: 7/9/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140714A	QC Batch: R94118				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/14/2014 07:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 03:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	PT1-MW-01-059b-Q3
Lab Order:	N012909	Collection Date:	7/9/2014 9:35:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012909-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093	PrepDate	Analyst: RB
Hexavalent Chromium	530 0.80	10	µg/L 50 7/11/2014 03:50 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-04-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093			PrepDate			Analyst: RB
Hexavalent Chromium	1400	1.6	20	µg/L	100	7/11/2014 04:01 PM	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-32D-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/11/2014 04:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/11/2014 07:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	SC-MW-32S-059b-Q3
Lab Order:	N012909	Collection Date:	7/9/2014 11:09:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012909-008		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711A	QC Batch: R94093	PrepDate	Analyst: RB			
Hexavalent Chromium	ND	0.016	0.20	µg/L	1	7/11/2014 04:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-009

Client Sample ID: MW-934-059b-Q3
Collection Date: 7/9/2014 12:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	55	0.16	2.0		µg/L	10	7/11/2014 06:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	50	0.030	1.0		µg/L	1	7/11/2014 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-010

Client Sample ID: SC-MW-38D-059b-Q3
Collection Date: 7/9/2014 12:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094				PrepDate		Analyst: RB
Hexavalent Chromium	55	0.16	2.0		µg/L	10	7/11/2014 06:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Chromium	52	0.030	1.0		µg/L	1	7/11/2014 08:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-011

Client Sample ID: SC-MW-38S-059b-Q3
Collection Date: 7/9/2014 12:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140711B	QC Batch: R94094			PrepDate			Analyst: RB
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	7/11/2014 06:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94118	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118
Client ID: PBW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804365
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94118	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118
Client ID: LCSW	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804366
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.201	0.060	0.2000	0	100 90 110
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Sample ID N012920-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804368
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.021	0.060			0.01853 0 20
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Sample ID N012920-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804369
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.208	0.060	0.2000	0.01853	94.9 90 110
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Sample ID N012920-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118
Client ID: ZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804371
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.186	0.060	0.2000	0	92.9 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012920-002AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110	0.1859	8.70	20	

Sample ID N012906-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.04006	90.9	90	110				

Sample ID N012908-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0.01246	91.8	90	110				

Sample ID N012908-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01492	97.5	90	110				

Sample ID N012906-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804385						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.246	0.060	0.2000	0.03626	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012908-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804387						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01475	99.7	90	110				

Sample ID N012908-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01415	95.2	90	110				

Sample ID N012908-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02685	94.6	90	110				

Sample ID N012908-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0	113	90	110				S

Sample ID N012908-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804397						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.238	0.060	0.2000	0.03638	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012908-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804398						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0.01950	94.4	90	110				

Sample ID N012909-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804400						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110				

Sample ID N012909-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94118						
Client ID: ZZZZZZ	Batch ID: R94118	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1804402						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94093	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: PBW	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802724						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94093	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: LCSW	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802725						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.953	0.20	5.000	0	99.1	90	110				
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Sample ID N012906-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802727						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.144	0.20						1.154	0.870	20	
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Sample ID N012906-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802728						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.124	0.20	1.000	1.154	97.0	90	110				
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Sample ID N012906-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802729						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.122	0.20	1.000	1.154	96.7	90	110	2.124	0.113	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802731						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.271	0.20	1.000	0.2451	103	90	110
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Sample ID N012906-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802737						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.388	0.20	1.000	1.403	98.5	90	110
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Sample ID N012906-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802737						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.846	0.20	1.000	2.882	96.5	90	110
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Sample ID N012906-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802739						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.214	0.20	1.000	2.281	93.3	90	110
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Sample ID N012906-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802741						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.019	0.20	1.000	0.02930	99.0	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802743						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.813	0.20	5.000	3.817	99.9	90	110				

Sample ID N012906-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802745						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.211	0.20	1.000	0.2184	99.3	90	110				

Sample ID N012906-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802749						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.674	0.20	1.000	0.7074	96.7	90	110				

Sample ID N012906-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.074	0.20	1.000	0.1108	96.3	90	110				

Sample ID N012906-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802753						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.528	0.20	1.000	1.544	98.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012906-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.156	0.20	1.000	1.174	98.2	90	110				

Sample ID N012909-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802766						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.006	0.20	1.000	0.9775	103	90	110				

Sample ID N012909-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802767						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				

Sample ID N012909-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802768						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.244	0.20	1.000	0.2385	101	90	110				

Sample ID N012909-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012909-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802772							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.006	0.20	1.000	0	101	90	110				

Sample ID N012909-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94093						
Client ID: ZZZZZZ	Batch ID: R94093	TestNo: EPA 218.6	Analysis Date: 7/11/2014	SeqNo: 1802773							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.986	0.20	1.000	0	98.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94094	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: PBW	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94094	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: LCSW	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802843						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.864	0.20	5.000	0	97.3	90	110				
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Sample ID N012909-011A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802847						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.433	0.20						2.419	0.565	20	
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Sample ID N012909-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.410	0.20	1.000	2.419	99.1	90	110				
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Sample ID N012909-011A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802851						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.395	0.20	1.000	2.419	97.6	90	110	3.410	0.458	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802866						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.085	0.20	1.000	1.052	103	90	110
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Sample ID N012908-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802867						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.017	0.20	1.000	0.03610	98.0	90	110
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Sample ID N012908-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802868						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.061	0.20	1.000	0.05490	101	90	110
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Sample ID N012908-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802869						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.009	0.20	1.000	0	101	90	110
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Sample ID N012908-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802870						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.019	0.20	1.000	2.004	101	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802873						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.002	0.20	1.000	2.011	99.1	90	110				

Sample ID N012908-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/11/2014	SeqNo: 1802874						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0.03870	97.9	90	110				

Sample ID N012908-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802875						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.353	0.20	1.000	0.3670	98.6	90	110				

Sample ID N012908-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.333	0.20	1.000	0.3343	99.8	90	110				

Sample ID N012908-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1802877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.144	0.20	1.000	3.118	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012908-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1802878							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.129	0.20	1.000	3.152	97.7	90	110				

Sample ID N012908-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94094						
Client ID: ZZZZZZ	Batch ID: R94094	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1802879							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.645	0.20	1.000	3.707	93.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46025	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: PBW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803398						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46025	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: LCSW	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803399						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.847 1.0 10.00 0 98.5 85 115

Sample ID N012908-025B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803405						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.433 1.0 10.00 2.060 93.7 75 125

Sample ID N012908-025B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100						
Client ID: ZZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.452 1.0 10.00 2.060 93.9 75 125 11.43 0.168 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-005

Client Sample ID: PT1-MW-01-059b-Q3
Collection Date: 7/9/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	110	0.33	5.0		mg/L	10	7/10/2014 02:45 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	3.7	0.010	0.10		mg/L	2	7/10/2014 09:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-006

Client Sample ID: PT1-MW-04-059b-Q3
Collection Date: 7/9/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/10/2014 02:58 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140710A	QC Batch: R94082				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	7/10/2014 08:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94082_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082
Client ID: PBW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802361
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	ND	0.50			

Sample ID LCS-R94082_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082
Client ID: LCSW	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802362
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	5.004	0.50	5.000	0	100 90 110

Sample ID N012908-010C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802376
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	64.300	5.0			64.42 0.186 20

Sample ID N012908-010C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802377
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	113.710	5.0	50.00	64.42	98.6 80 120

Sample ID N012908-010C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94082
Client ID: ZZZZZ	Batch ID: R94082	TestNo: EPA 300.0		Analysis Date: 7/10/2014	SeqNo: 1802378
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Sulfate	113.260	5.0	50.00	64.42	97.7 80 120 113.7 0.397 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	PT1-MW-01-059b-Q3
Lab Order:	N012909	Collection Date:	7/9/2014 9:35:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012909-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L		1	7/12/2014 06:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-04-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140712A	QC Batch: R94106			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/12/2014 06:32 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94106	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: PBW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803869
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94106	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: LCSW	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803870
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.658	1.0	10.00	0	107	85	115				
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Sample ID N012927-001A-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803872
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.753	1.0	10.00	0.7782	110	75	125				
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Sample ID N012927-001A-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94106
Client ID: ZZZZZ	Batch ID: R94106	TestNo: SM 5310C		Analysis Date: 7/12/2014	SeqNo: 1803873
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	11.880	1.0	10.00	0.7782	111	75	125	11.75	1.07	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-001

Client Sample ID: MW-37-059b-Q3
Collection Date: 7/9/2014 3:33:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/11/2014 02:07 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-002

Client Sample ID: MW-155D-059b-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI	
Iron	0.10	0.0013	0.020	mg/L	1	7/11/2014 02:12 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-003

Client Sample ID: MW-155S-059b-Q3
Collection Date: 7/9/2014 10:43:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022			PrepDate	7/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/11/2014 02:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-01-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 9:35:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate	7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/11/2014 02:29 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-04-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate	7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 7/11/2014 02:34 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-32S-059b-Q3
Lab Order: N012909 **Collection Date:** 7/9/2014 11:09:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012909-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140711A** QC Batch: **46022** PrepDate: **7/11/2014** Analyst: **CEI**
Iron 0.66 0.0013 0.020 mg/L 1 7/11/2014 02:39 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-38D-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 12:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate: 7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/11/2014 02:50 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-38S-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 12:55:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140711A	QC Batch: 46022	PrepDate: 7/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/11/2014 02:54 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46022	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: PBW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804466
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.002	0.020			
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Sample ID LCS1-46022	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: LCSW	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804471
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.108	0.020	0.1000	0	108 85 115
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Sample ID N012897-001B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804473
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.098	0.020	0.1000	0	98.3 75 125
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Sample ID N012897-001B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/11/2014	RunNo: 94107
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1804474
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.098	0.020	0.1000	0	98.3 75 125 0.09834 0.0525 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-001

Client Sample ID: MW-37-059b-Q3
Collection Date: 7/9/2014 3:33:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014	Analyst: CEI
Arsenic	1.8	0.027	0.10	µg/L	1	7/11/2014 07:25 PM
Manganese	ND	0.026	0.50	µg/L	1	7/11/2014 07:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-002

Client Sample ID: MW-155D-059b-Q3
Collection Date: 7/9/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014	Analyst: CEI
Arsenic	4.5	0.027	0.10	µg/L	1	7/11/2014 07:31 PM
Manganese	330	0.13	2.5	µg/L	5	7/12/2014 12:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-003

Client Sample ID: MW-155S-059b-Q3
Collection Date: 7/9/2014 10:43:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Arsenic	3.5	0.027	0.10		µg/L	1	7/11/2014 07:36 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 07:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-01-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 9:35:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

RunID: ICP7_140711A	EPA 3010A		EPA 6020		PrepDate	7/11/2014	Analyst: CEI
	QC Batch: 46025						
Arsenic	0.87	0.027	0.10		µg/L	1	7/11/2014 07:42 PM
Manganese	180	0.026	0.50		µg/L	1	7/11/2014 07:42 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PT1-MW-04-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014		Analyst: CEI
Arsenic	2.7	0.027	0.10		µg/L	1	7/11/2014 07:47 PM
Manganese	32	0.026	0.50		µg/L	1	7/11/2014 07:47 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-32S-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 11:09:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014	Analyst: CEI	
Arsenic	2.4	0.027	0.10		µg/L	1	7/11/2014 08:09 PM
Manganese	1600	0.64	12		µg/L	25	7/12/2014 01:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-009

Client Sample ID: MW-934-059b-Q3
Collection Date: 7/9/2014 12:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014	Analyst: CEI	
Arsenic	0.91	0.027	0.10		µg/L	1	7/11/2014 08:15 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-38D-059b-Q3
Lab Order: N012909	Collection Date: 7/9/2014 12:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012909-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140711A	QC Batch: 46025			PrepDate	7/11/2014		Analyst: CEI
Arsenic	0.97	0.027	0.10		µg/L	1	7/11/2014 08:20 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 08:20 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012909-011

Client Sample ID: SC-MW-38S-059b-Q3
Collection Date: 7/9/2014 12:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140711A	QC Batch: 46025				PrepDate	7/11/2014	Analyst: CEI
Arsenic	2.4	0.027	0.10		µg/L	1	7/11/2014 08:26 PM
Manganese	ND	0.026	0.50		µg/L	1	7/11/2014 08:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46025	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: PBW	Batch ID: 46025	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803477
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	ND	0.10			
Manganese	0.168	0.50			

Sample ID LCS-46025	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: LCSW	Batch ID: 46025	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803478
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	10.496	0.10	10.00	0	105 85 115
Manganese	103.436	0.50	100.0	0	103 85 115

Sample ID N012908-025B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803484
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	27.624	0.10	10.00	17.33	103 75 125
Manganese	96.460	0.50	100.0	0	96.5 75 125

Sample ID N012908-025B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/11/2014	RunNo: 94100
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/11/2014	SeqNo: 1803485
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	27.373	0.10	10.00	17.33	100 75 125 27.62 0.914 20
Manganese	96.864	0.50	100.0	0	96.9 75 125 96.46 0.418 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley		Container:		250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS
Location Hinkley		Preservatives:		(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	4°C (blue ice)		
Project Number 492581.UR.IR.FW		Filtered:		Field	Field	Field	Field	Field	Field	NA	NA	Field		
Project Manager Jennifer Low		Holding Time (days):		28	180	180	180	180	2	7	28	7		
Sample Manager Jim Hanvey				Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIS) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Metals Dissolved (6020AFF) FF Cr	Metals Dissolved (6020AFF) FF Cr	Anions (E300.0) FF NO3N, SO4	TDS (SM2540C)	TOC (E5310)	Eosine, Fluorescein FF	
Cell Number (404) 229-2181														
Fax Number (510) 622-9136														
Task Order 59														
Project 2014-COMPLIANCE-IRZ-059B-Q3														
Turnaround Time 10 Days														
Shipping Date:														
COC Number:														
SAMPLE ID	DATE	TIME	Matrix											
MW-37-059b-Q3	7/9/2014	1533	Water	X	X	X				X			3	DM
MW-61-059b-Q3	7/9/2014		Water	X	X	X				X			3	
MW-925-059b-Q3	7/9/2014		Water	X	X	X				X			3	
MW-155D-059b-Q3	7/9/2014	0907	Water	X	X	X				X			3	JM
MW-155S-059b-Q3	7/9/2014	1043	Water	X	X	X				X			3	JM
MW-743-059b-Q3	7/9/2014	1310	Water	X									1	LB
PT1-MW-01-059b-Q3	7/9/2014	0935	Water	X	X		X		X				6	LB
PT1-MW-04-059b-Q3	7/9/2014	0841	Water	X	X		X		X				6	LB
SC-MW-32D-059b-Q3	7/9/2014	1033	Water	X				X				X	3	LB
SC-MW-32S-059b-Q3	7/9/2014	1109	Water	X	X		X					X	3	LB
MW-934-059b-Q3	7/9/2014	1206	Water	X	X	X							2	LB
SC-MW-38D-059b-Q3	7/9/2014	1201	Water	X	X	X							2	LB
SC-MW-38S-059b-Q3	7/9/2014	1255	Water	X	X		X						2	LB
TOTAL NUMBER OF CONTAINERS												34		

NO12909-1

-2

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-9

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-11

Approved by	<i>K. Blue</i>	Signatures	Date/Time	7/9/14 1630	Shipping Details	ATTN:	Special Instructions:
Sampled by	<i>[Signature]</i>		7/9/14 1635	Method of Shipment:			
Relinquished by	<i>[Signature]</i>		7/9/14 1635	On Ice: (yes) / no <i>3-700 (RAZ)</i>			
Received by	<i>[Signature]</i>		7/9/14 1635	Airbill No:			
Relinquished by	<i>[Signature]</i>		7/9/14 1635	Lab Name: Advanced Technology Laboratories			
Received by	<i>[Signature]</i>		7/9/14 1927	Lab Phone: (702) 307-2659		Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/9/2014 Workorder: N012909
 Rep sample Temp (Deg C): 3.7 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC Cortez 7/10/14

Reviewed By: rog 07/14/14



ASSET Laboratories

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www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protem, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

Field Sampler: SIGNED

10-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCEIN
N012909-007C / SC-MW-32D-059b-Q3	Water	7/9/2014 10:33:00 AM	2OZP	1	1
N012909-008C / SC-MW-32S-059b-Q3	Water	7/9/2014 11:09:00 AM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012909 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

		FedEx#: 7705 6929 1675		
Relinquished by: <u>ACortez</u>	Date/Time		Received by:	Date/Time
	7/10/14	1500		
Relinquished by: _____	_____		Received by:	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012909-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.7636-61.7318)*1000000}{100}$$

318 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 320 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/14/2014								TDS/CONDUCTIVITY
Date Finished: 7/15/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46044	100	63.5096	63.5096	0	1	0.00		
LCS-46044	100	64.1093	64.2092	999	1	999.00		
N012907-001C	100	63.9949	64.0252	303	1	303.00	427	0.71
N012907-001C-DUP	100	63.9758	64.0061	303	1	303.00	427	0.71
N012907-002C	100	64.2754	64.3796	1042	1	1042.00	1408	0.74
N012908-010D	100	62.9939	63.0279	340	1	340.00	530	0.64
N012908-011D	100	63.7802	63.8646	844	1	844.00	1200	0.70
N012908-015D	100	63.3738	63.4429	691	1	691.00	1011	0.68
N012908-016D	100	61.3605	61.4305	700	1	700.00	1005	0.70
N012908-017D	100	63.8031	63.8433	402	1	402.00	653	0.62
N012908-018C	100	62.4484	62.5012	528	1	528.00	933	0.57
N012908-019C	100	64.256	64.3167	607	1	607.00	935	0.65
N012909-001C	100	61.7318	61.7636	318	1	318.00	466	0.68
N012909-002C	100	60.6357	60.6656	299	1	299.00	419	0.71
N012909-003C	100	60.9842	61.0214	372	1	372.00	472	0.79

Jmer
7/15/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012909-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/22/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012909-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 14.4693 * 100 \\ &= 1446.93\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1400$$

 7/23/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012909-005C** concentration in mg/L is calculated as follows:

$$\begin{aligned}\text{Nitrate, mg/L} &= 1.872 * 2 \\ &= 3.744\end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 3.7$$

Nancy 7/22/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012909-005D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.45200] [1] - 0.04960$$

$$\text{TOC} = 0.40240$$

Reporting results in two significant figures,

$$\text{TOC} = \mathbf{0.40} \text{ mg/L}$$

since result is <PQL,

$$\text{TOC} = \mathbf{ND}$$

JT 7/22/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012909-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.1036149325 * 1 * (25/25) \\ &= 0.1036149325 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.10$$

 7/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012909
Test Method: EPA 6010
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46022

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012897-001B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012897-001B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94107						
Client ID: ZZZZZ	Batch ID: 46022	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1804472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4.827	0.040	5.000	0	96.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012909-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.30690197076981 * 1 * (25/25) \\ &= 1.30690197076981 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.3$$

 7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012909
Test Method: EPA 6020
Analysis Date: 7/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46025

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012908-025B-DT 5X	Chromium	µg/L	2.144412752	NA	2.059592017	4.12%	10
N012908-025B-DT 5X	Arsenic	µg/L	17.19823652	PASS	17.33384226	0.78%	10
N012908-025B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012908-025B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803404							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.806	2.0	20.00	2.060	93.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012909
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012908-025B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94100						
Client ID: ZZZZZ	Batch ID: 46025	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/11/2014	SeqNo: 1803483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	38.026	0.20	20.00	17.33	103	80	120				
Manganese	191.676	1.0	200.0	0	95.8	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 24, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012916

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 10, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012916

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protom, Missouri.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 24-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012916
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012916-001A	MW-746-059b-Q3	Water	7/10/2014 3:50:00 PM	7/10/2014	7/24/2014
N012916-002A	MW-78S-059b-Q3	Water	7/10/2014 4:08:00 PM	7/10/2014	7/24/2014
N012916-002B	MW-78S-059b-Q3	Water	7/10/2014 4:08:00 PM	7/10/2014	7/24/2014
N012916-002C	MW-78S-059b-Q3	Water	7/10/2014 4:08:00 PM	7/10/2014	7/24/2014
N012916-003A	MW-745-059b-Q3	Water	7/10/2014 2:55:00 PM	7/10/2014	7/24/2014
N012916-004A	MW-17-059b-Q3	Water	7/10/2014 1:47:00 PM	7/10/2014	7/24/2014
N012916-004B	MW-17-059b-Q3	Water	7/10/2014 1:47:00 PM	7/10/2014	7/24/2014
N012916-004C	MW-17-059b-Q3	Water	7/10/2014 1:47:00 PM	7/10/2014	7/24/2014
N012916-005A	MW-17D-059b-Q3	Water	7/10/2014 8:56:00 AM	7/10/2014	7/24/2014
N012916-005B	MW-17D-059b-Q3	Water	7/10/2014 8:56:00 AM	7/10/2014	7/24/2014
N012916-005C	MW-17D-059b-Q3	Water	7/10/2014 8:56:00 AM	7/10/2014	7/24/2014
N012916-006A	MW-39-059b-Q3	Water	7/10/2014 10:38:00 AM	7/10/2014	7/24/2014
N012916-006B	MW-39-059b-Q3	Water	7/10/2014 10:38:00 AM	7/10/2014	7/24/2014
N012916-006C	MW-39-059b-Q3	Water	7/10/2014 10:38:00 AM	7/10/2014	7/24/2014
N012916-007A	MW-39D-059b-Q3	Water	7/10/2014 9:48:00 AM	7/10/2014	7/24/2014
N012916-007B	MW-39D-059b-Q3	Water	7/10/2014 9:48:00 AM	7/10/2014	7/24/2014
N012916-007C	MW-39D-059b-Q3	Water	7/10/2014 9:48:00 AM	7/10/2014	7/24/2014
N012916-008A	MW-73D-059b-Q3	Water	7/10/2014 3:04:00 PM	7/10/2014	7/24/2014
N012916-008B	MW-73D-059b-Q3	Water	7/10/2014 3:04:00 PM	7/10/2014	7/24/2014
N012916-009A	MW-73S-059b-Q3	Water	7/10/2014 3:38:00 PM	7/10/2014	7/24/2014
N012916-009B	MW-73S-059b-Q3	Water	7/10/2014 3:38:00 PM	7/10/2014	7/24/2014
N012916-010A	SA-MW-27D-059b-Q3	Water	7/10/2014 12:57:00 PM	7/10/2014	7/24/2014
N012916-010B	SA-MW-27D-059b-Q3	Water	7/10/2014 12:57:00 PM	7/10/2014	7/24/2014
N012916-011A	SA-MW-27S-059b-Q3	Water	7/10/2014 11:47:00 AM	7/10/2014	7/24/2014
N012916-011B	SA-MW-27S-059b-Q3	Water	7/10/2014 11:47:00 AM	7/10/2014	7/24/2014
N012916-012A	MW-744-059b-Q3	Water	7/10/2014 3:17:00 PM	7/10/2014	7/24/2014
N012916-013A	MW-38A-059b-Q3	Water	7/10/2014 11:31:00 AM	7/10/2014	7/24/2014
N012916-013B	MW-38A-059b-Q3	Water	7/10/2014 11:31:00 AM	7/10/2014	7/24/2014
N012916-013C	MW-38A-059b-Q3	Water	7/10/2014 11:31:00 AM	7/10/2014	7/24/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012916
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012916-014A	MW-38B-059b-Q3	Water	7/10/2014 11:18:00 AM	7/10/2014	7/24/2014
N012916-014B	MW-38B-059b-Q3	Water	7/10/2014 11:18:00 AM	7/10/2014	7/24/2014
N012916-014C	MW-38B-059b-Q3	Water	7/10/2014 11:18:00 AM	7/10/2014	7/24/2014
N012916-015A	MW-930-059b-Q3	Water	7/10/2014 4:00:00 PM	7/10/2014	7/24/2014
N012916-015B	MW-930-059b-Q3	Water	7/10/2014 4:00:00 PM	7/10/2014	7/24/2014
N012916-015C	MW-930-059b-Q3	Water	7/10/2014 4:00:00 PM	7/10/2014	7/24/2014
N012916-015D	MW-930-059b-Q3	Water	7/10/2014 4:00:00 PM	7/10/2014	7/24/2014
N012916-016A	SA-MW-15S-059b-Q3	Water	7/10/2014 3:53:00 PM	7/10/2014	7/24/2014
N012916-016B	SA-MW-15S-059b-Q3	Water	7/10/2014 3:53:00 PM	7/10/2014	7/24/2014
N012916-016C	SA-MW-15S-059b-Q3	Water	7/10/2014 3:53:00 PM	7/10/2014	7/24/2014
N012916-016D	SA-MW-15S-059b-Q3	Water	7/10/2014 3:53:00 PM	7/10/2014	7/24/2014



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-38A-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 11:31:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140715B	QC Batch: 46059			PrepDate	7/15/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	430	10	10	mg/L	1	7/15/2014 01:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-38B-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 11:18:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140715B	QC Batch: 46059			PrepDate: 7/15/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1000	10	10	mg/L	1	7/15/2014 01:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46059	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: PBW	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805476						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46059	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: LCSW	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		930.000	10	1000	0	93.0	80	120			

Sample ID N012914-004E-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: ZZZZZ	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805479						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		311.000	10					308.0	0.969	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-001

Client Sample ID: MW-746-059b-Q3
Collection Date: 7/10/2014 3:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 01:36 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 10:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-002

Client Sample ID: MW-78S-059b-Q3
Collection Date: 7/10/2014 4:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/14/2014 11:16 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/12/2014 08:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-003

Client Sample ID: MW-745-059b-Q3
Collection Date: 7/10/2014 2:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 01:57 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 11:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-004

Client Sample ID: MW-17-059b-Q3
Collection Date: 7/10/2014 1:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	110	0.16	2.0		µg/L	10	7/14/2014 12:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	99	0.030	1.0		µg/L	1	7/12/2014 09:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 24-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-005

Client Sample ID: MW-17D-059b-Q3
Collection Date: 7/10/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149	PrepDate:	Analyst: RB
Hexavalent Chromium	0.38 0.016	0.20	µg/L 1 7/14/2014 12:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-006

Client Sample ID: MW-39-059b-Q3
Collection Date: 7/10/2014 10:38:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	0.97	0.016	0.20		µg/L	1	7/14/2014 12:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/12/2014 09:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-007

Client Sample ID: MW-39D-059b-Q3
Collection Date: 7/10/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149			PrepDate		Analyst: RB
Hexavalent Chromium	23	0.032	0.40	µg/L	2	7/14/2014 12:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-008

Client Sample ID: MW-73D-059b-Q3
Collection Date: 7/10/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	0.81	0.016	0.20		µg/L	1	7/14/2014 12:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/12/2014 09:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-009

Client Sample ID: MW-73S-059b-Q3
Collection Date: 7/10/2014 3:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	0.92	0.016	0.20		µg/L	1	7/14/2014 01:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/12/2014 10:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-010

Client Sample ID: SA-MW-27D-059b-Q3
Collection Date: 7/10/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/14/2014 01:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/12/2014 10:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-011

Client Sample ID: SA-MW-27S-059b-Q3
Collection Date: 7/10/2014 11:47:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	0.28	0.016	0.20		µg/L	1	7/14/2014 01:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/12/2014 10:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-012

Client Sample ID: MW-744-059b-Q3
Collection Date: 7/10/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 02:18 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 01:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-013

Client Sample ID: MW-38A-059b-Q3
Collection Date: 7/10/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/14/2014 01:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/12/2014 10:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-014

Client Sample ID: MW-38B-059b-Q3
Collection Date: 7/10/2014 11:18:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	28	0.032	0.40		µg/L	2	7/14/2014 02:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate	7/12/2014	Analyst: CEI
Chromium	27	0.030	1.0		µg/L	1	7/12/2014 10:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-015

Client Sample ID: MW-930-059b-Q3
Collection Date: 7/10/2014 4:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149			PrepDate		Analyst: RB
Hexavalent Chromium	29	0.080	1.0	µg/L	5	7/14/2014 04:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-15S-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 3:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149			PrepDate			Analyst: RB
Hexavalent Chromium	29	0.080	1.0		µg/L	5	7/14/2014 02:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94144	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: PBW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805549
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94144	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: LCSW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805550
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.202 0.060 0.2000 0 101 90 110

Sample ID N012914-016ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805552
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.016 0.060 0.01821 0 20

Sample ID N012914-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805554
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.216 0.060 0.2000 0.03243 91.8 90 110

Sample ID N012914-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805555
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.204 0.060 0.2000 0.01821 93.1 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012914-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.389	0.060	0.2000	0.1831	103	90	110				

Sample ID N012914-025AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805558						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.374	0.060	0.2000	0.1831	95.3	90	110	0.3887	3.95	20	

Sample ID N012914-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.250	0.060	0.2000	0.04395	103	90	110				

Sample ID N012916-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0.01297	97.0	90	110				

Sample ID N012916-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01744	95.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012916-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01292	102	90	110				

Sample ID N012918-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.294	0.060	0.2000	0.09825	97.7	90	110				

Sample ID N012918-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805574						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01296	95.9	90	110				

Sample ID N012918-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805576						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02054	97.8	90	110				

Sample ID N012929-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01779	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012929-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805580						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01747	101	90	110				

Sample ID N012929-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805584						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.6	90	110				

Sample ID N012929-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01301	98.6	90	110				

Sample ID N012929-032AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805588						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01650	97.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94149	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: PBW	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94149	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: LCSW	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805834						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.870	0.20	5.000	0	97.4	90	110				
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Sample ID N012916-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805836						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012916-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.985	0.20	1.000	0	98.5	90	110				
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Sample ID N012916-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805838						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110	0.9854	0.698	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012916-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.065	0.20	1.000	1.090	97.5	90	110				

Sample ID N012916-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				

Sample ID N012916-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.363	0.20	1.000	0.3755	98.7	90	110				

Sample ID N012916-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.987	0.20	1.000	0.9730	101	90	110				

Sample ID N012916-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.774	0.20	1.000	0.8090	96.5	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012916-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.914	0.20	1.000	0.9179	99.6	90	110				

Sample ID N012916-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.703	0.20	1.000	1.741	96.2	90	110				

Sample ID N012916-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.286	0.20	1.000	0.2827	100	90	110				

Sample ID N012916-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805865						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N012916-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805868						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.098	0.20	1.000	1.121	97.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805874							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.155	0.20	1.000	0.1474	101	90	110				

Sample ID N012929-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805875							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.982	0.20	1.000	0	98.2	90	110				

Sample ID N012929-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805876							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.023	0.20	1.000	0	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46032	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: PBW	Batch ID: 46032	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803723						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46032	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: LCSW	Batch ID: 46032	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803724						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.750 1.0 10.00 0 97.5 85 115

Sample ID N012916-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46032	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803728						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.554 1.0 10.00 1.145 94.1 75 125

Sample ID N012916-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46032	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803729						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.651 1.0 10.00 1.145 95.1 75 125 10.55 0.915 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-015

Client Sample ID: MW-930-059b-Q3
Collection Date: 7/10/2014 4:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/11/2014 12:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Sulfate	140	0.33	5.0		mg/L	10	7/11/2014 02:26 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Nitrate as N	12	0.051	0.50		mg/L	10	7/11/2014 02:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-016

Client Sample ID: SA-MW-15S-059b-Q3
Collection Date: 7/10/2014 3:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/11/2014 12:33 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Sulfate	130	0.66	10		mg/L	20	7/11/2014 02:39 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098				PrepDate		Analyst: PS
Nitrate as N	12	0.10	1.0		mg/L	20	7/11/2014 02:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94098_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: PBW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94098_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: LCSW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.527 0.10 2.500 0 101 90 110

Sample ID N012916-015C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 0.078 0.10 0 0 20

Sample ID N012916-015C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803262						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.717 0.10 2.500 0 68.7 80 120 S

Sample ID N012916-015C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803263						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.690 0.10 2.500 0 67.6 80 120 1.717 1.58 20 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94098_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: PBW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94098_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: LCSW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803273						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 5.084 0.50 5.000 0 102 90 110

Sample ID N012914-010C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 76.160 10 77.30 1.49 20

Sample ID N012914-010C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 175.720 10 100.0 77.30 98.4 80 120

Sample ID N012914-010C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803284						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 175.880 10 100.0 77.30 98.6 80 120 175.7 0.0910 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012919-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803317						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.795	0.25	5.000	3.775	100	80	120	8.755	0.456	20	

Sample ID N012919-002B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.990	0.25	5.000	3.915	102	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-015

Client Sample ID: MW-930-059b-Q3
Collection Date: 7/10/2014 4:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 09:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	SA-MW-15S-059b-Q3
Lab Order:	N012916	Collection Date:	7/10/2014 3:53:00 PM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012916-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 09:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94138	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: PBW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804875
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94138	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: LCSW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804876
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.681 1.0 10.00 0 107 85 115

Sample ID N012929-009D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804877
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.396 1.0 10.00 0.5304 98.7 75 125

Sample ID N012929-009D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804878
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.331 1.0 10.00 0.5304 98.0 75 125 10.40 0.633 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-004

Client Sample ID: MW-17-059b-Q3
Collection Date: 7/10/2014 1:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 11:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-39-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 10:38:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 11:35 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-008

Client Sample ID: MW-73D-059b-Q3
Collection Date: 7/10/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 11:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-009

Client Sample ID: MW-73S-059b-Q3
Collection Date: 7/10/2014 3:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 11:53 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-27D-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 12:57:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 11:57 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-011

Client Sample ID: SA-MW-27S-059b-Q3
Collection Date: 7/10/2014 11:47:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 12:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-38A-059b-Q3
Lab Order: N012916	Collection Date: 7/10/2014 11:31:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012916-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 12:06 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-014

Client Sample ID: MW-38B-059b-Q3
Collection Date: 7/10/2014 11:18:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 12:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-015

Client Sample ID: MW-930-059b-Q3
Collection Date: 7/10/2014 4:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 12:16 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-15S-059b-Q3
Lab Order: N012916 **Collection Date:** 7/10/2014 3:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012916-016

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46041** PrepDate: **7/14/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 7/14/2014 12:21 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46041	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: PBW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804518
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46041	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: LCSW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804519
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.112 0.020 0.1000 0 112 85 115

Sample ID N012916-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804523
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125

Sample ID N012916-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804524
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125 0.1008 0.397 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-002

Client Sample ID: MW-78S-059b-Q3
Collection Date: 7/10/2014 4:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	1.7	0.027	0.10	µg/L	1	7/12/2014 08:58 PM
Manganese	0.52	0.026	0.50	µg/L	1	7/12/2014 08:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-004

Client Sample ID: MW-17-059b-Q3
Collection Date: 7/10/2014 1:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	1.0	0.027	0.10	µg/L	1	7/12/2014 09:26 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 09:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 24-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-005

Client Sample ID: MW-17D-059b-Q3
Collection Date: 7/10/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate: 7/12/2014		Analyst: CEI	
Manganese	17	0.026	0.50	µg/L	1	7/12/2014 09:32 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-006

Client Sample ID: MW-39-059b-Q3
Collection Date: 7/10/2014 10:38:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	3.9	0.027	0.10	µg/L	1	7/12/2014 09:48 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 09:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-007

Client Sample ID: MW-39D-059b-Q3
Collection Date: 7/10/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 09:54 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-008

Client Sample ID: MW-73D-059b-Q3
Collection Date: 7/10/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	1.5	0.027	0.10	µg/L	1	7/12/2014 09:59 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 09:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-009

Client Sample ID: MW-73S-059b-Q3
Collection Date: 7/10/2014 3:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	1.9	0.027	0.10	µg/L	1	7/12/2014 10:05 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 10:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-010

Client Sample ID: SA-MW-27D-059b-Q3
Collection Date: 7/10/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032				PrepDate: 7/12/2014		Analyst: CEI
Arsenic	4.3	0.027	0.10		µg/L	1	7/12/2014 10:10 PM
Manganese	ND	0.026	0.50		µg/L	1	7/12/2014 10:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-011

Client Sample ID: SA-MW-27S-059b-Q3
Collection Date: 7/10/2014 11:47:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	4.7	0.027	0.10	µg/L	1	7/12/2014 10:16 PM
Manganese	31	0.026	0.50	µg/L	1	7/12/2014 10:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-013

Client Sample ID: MW-38A-059b-Q3
Collection Date: 7/10/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	0.80	0.027	0.10	µg/L	1	7/12/2014 10:21 PM
Manganese	15	0.026	0.50	µg/L	1	7/12/2014 10:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-014

Client Sample ID: MW-38B-059b-Q3
Collection Date: 7/10/2014 11:18:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	0.74	0.027	0.10	µg/L	1	7/12/2014 10:27 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 10:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-015

Client Sample ID: MW-930-059b-Q3
Collection Date: 7/10/2014 4:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	0.68	0.027	0.10	µg/L	1	7/12/2014 10:32 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 10:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012916-016

Client Sample ID: SA-MW-15S-059b-Q3
Collection Date: 7/10/2014 3:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46032			PrepDate	7/12/2014	Analyst: CEI
Arsenic	0.66	0.027	0.10	µg/L	1	7/12/2014 10:38 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 10:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46032	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: PBW	Batch ID: 46032	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803574
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46032	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: LCSW	Batch ID: 46032	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803575
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.266	0.10	10.00	0	103 85 115
Manganese	103.207	0.50	100.0	0	103 85 115

Sample ID N012916-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: ZZZZZ	Batch ID: 46032	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803579
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	11.845	0.10	10.00	1.669	102 75 125
Manganese	98.848	0.50	100.0	0.5195	98.3 75 125

Sample ID N012916-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: ZZZZZ	Batch ID: 46032	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803580
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.009	0.10	10.00	1.669	103 75 125 11.84 1.38 20
Manganese	99.356	0.50	100.0	0.5195	98.8 75 125 98.85 0.513 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name	Location	Project Number	Project Manager	Sample Manager	Cell Number	Fax Number	Task Order	Project	Turnaround Time	Shipping Date:	COC Number:	Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS
												Preservatives:	(NH4)2 SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H2SO4, 4°C	4°C (blue ice)		
												Filtered:	Field	Field	Field	Field	Field	Field	Field	NA	NA	Field		
												Holding Time (days):	28	180	180	180	180	2	2	7	28	7		
													Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Metals Dissolved (6020AFF) FF Mn	Anions (E300.0) FF NO3N, SO4	Ortho-Phosphate (E300.0) FF	TDS (SM2540C)	TOC (E5310)	Eosine, Fluorescein FF		
SAMPLE ID	DATE	TIME	Matrix																					
MW-746-059b-Q3	7/10/2014	1550	Water	X																		1	DJ	
MW-78D-059b-Q3	7/10/2014		Water	X	X	X															X	2		
MW-78S-059b-Q3	7/10/2014	1608	Water	X	X	X															X	3	JM	
MW-745-059b-Q3	7/10/2014	1455	Water	X																		1	JM	
MW-17-059b-Q3	7/10/2014	1347	Water	X	X	X															X	3	JM	
MW-17D-059b-Q3	7/10/2014	0856	Water	X							X										X	3	JM	
MW-39-059b-Q3	7/10/2014	1038	Water	X	X	X															X	3	JM	
MW-39D-059b-Q3	7/10/2014	0948	Water	X							X										X	3	JM	
MW-73D-059b-Q3	7/10/2014	1504	Water	X	X	X																2	DM	
MW-73S-059b-Q3	7/10/2014	1538	Water	X	X	X																2	DM	
SA-MW-27D-059b-Q3	7/10/2014	1257	Water	X	X	X																2	JM	
SA-MW-27S-059b-Q3	7/10/2014	1147	Water	X	X	X																2	JM	
MW-744-059b-Q3	7/10/2014	1517	Water	X																		1	JD	
MW-38A-059b-Q3	7/10/2014	1131	Water	X	X	X														X		3	JD	
MW-38B-059b-Q3	7/10/2014	1118	Water	X	X	X														X		3	PM	
MW-930-059b-Q3	7/10/2014	1600	Water	X	X		X	X	X											X		6	LB	

No 12916-1

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Approved by: <u>[Signature]</u> Sampled by: <u>[Signature]</u> Relinquished by: <u>[Signature]</u> Received by: <u>[Signature]</u> Relinquished by: <u>[Signature]</u> Received by: <u>[Signature]</u>	Signatures Date/Time 7/10/14 1710 7/10/14 1710 7/10/14 1710 7/10/14 1710 7/10/14 2015 7/10/14	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2.8°C / 3.7°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/10/2014 Workorder: N012916
 Rep sample Temp (Deg C): 2.8/3.7 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: N/A Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Sample MW-73D-059-Q3 was received at pH 3. Acid was added to pH <2.

Checklist Completed B AC *Alcortez* 7/11/14

Reviewed By: *afg* 07/14/14



ASSET Laboratories

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TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protem, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

Field Sampler: SIGNED

14-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCHEIN
N012916-002C / MW-78S-059b-Q3	Water	7/10/2014 4:08:00 PM	2OZP	1	1
N012916-004C / MW-17-059b-Q3	Water	7/10/2014 1:47:00 PM	2OZP	1	1
N012916-005C / MW-17D-059-Q3	Water	7/10/2014 8:56:00 AM	2OZP	1	1
N012916-006C / MW-39-059b-Q3	Water	7/10/2014 10:38:00 AM	2OZP	1	1
N012916-007C / MW-39D-059b-Q3	Water	7/10/2014 9:48:00 AM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012916 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

		FedEx#: 7705 9631 7904		
Relinquished by: <u>ACortes</u> 7/14/14	Date/Time	1500	Received by: _____	Date/Time
Relinquished by: _____	Date/Time	_____	Received by: _____	Date/Time

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012916-013C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.3564-61.3134)*1000000}{100}$$

430 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 430 \text{ mg/L}$$


7/16/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/15/2014								TDS/CONDUCTIVITY
Date Finished: 7/16/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46059	100	60.6714	60.6717	3	1	3.00		
LCS-46059	100	61.2153	61.3083	930	1	930.00		
N012914-004E	100	60.3433	60.3741	308	1	308.00	495	0.62
N012914-004E-DUP	100	60.315	60.3461	311	1	311.00	495	0.63
N012914-005E	100	59.9065	59.9355	290	1	290.00	467	0.62
N012914-006E	100	61.0202	61.0489	287	1	287.00	469	0.61
N012914-010D	100	61.1218	61.1576	358	1	358.00	558	0.64
N012914-011E	100	61.1345	61.1717	372	1	372.00	559	0.67
N012914-012C	100	61.6767	61.7133	366	1	366.00	567	0.65
N012916-013C	100	61.3134	61.3564	430	1	430.00	685	0.63
N012916-014C	100	60.7715	60.8725	1010	1	1010.00	1419	0.71
N012917-001D	15	59.9021	60.0016	995	6.6666667	6633.33	8280	0.80
N012919-001C	100	60.8462	60.8804	342	1	342.00	739	0.46
N012919-002C	100	59.6119	59.6579	460	1	460.00	738	0.62
N012919-003C	100	60.4456	60.5294	838	1	838.00	1257	0.67
N012920-002C	60	60.8886	60.9929	1043	1.6666667	1738.33	2390	0.73
N012920-003C	65	60.5365	60.6399	1034	1.5384615	1590.77	2210	0.72

Jmer
7/16/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012916-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.012968 * 1 \\ &= 0.012968\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/23/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012916-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.0899 * 1 \\ &= 1.0899\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.1$$

 7/23/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012916-015C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.244 * 10 \\ &= 12.44 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 12$$

Nancy 7/23/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012916-015D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.96470] [1] - 0.05580$$

$$\text{TOC} = 0.90890$$

Reporting results in two significant figures,

$$\text{TOC} = 0.91 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 7/23/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012916-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0 * 1 * (25/25) \\ &= 0 \end{aligned}$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012916
Test Method: EPA 6010
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46041

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012916-002B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012916-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94121						
Client ID: ZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804522							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	5.078	0.040	5.000	0	102	80	120				
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Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012916-014B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 26.5985030105608 * 1 * (25/25) \\ &= 26.5985030105608 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 27$$

 7/23/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012916
Test Method: EPA 6020
Analysis Date: 7/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46032

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr, As & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012916-002B-DT 5X	Chromium	µg/L	1.164111358	NA	1.145415309	1.63%	10
N012916-002B-DT 5X	Arsenic	µg/L	1.661395382	NA	1.668734669	0.44%	10
N012916-002B-DT 5X	Manganese	µg/L	0.304645437	NA	0.519477985	41.36%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012916-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46032	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803727							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.760	2.0	20.00	1.145	93.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012916
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012916-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46032	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.318	0.20	20.00	1.669	98.2	80	120				
Manganese	196.700	1.0	200.0	0.5195	98.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 24, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012917

RE: PGE Hinkley, 492581.UR.AU.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 10, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012917

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 218.6:

Dilution was necessary on sample N012917-001 due to failed Retention Time criteria when sample was analyzed at no dilution.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012917
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012917-001A	MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	7/10/2014	7/24/2014
N012917-001B	MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	7/10/2014	7/24/2014
N012917-001C	MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	7/10/2014	7/24/2014
N012917-001D	MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	7/10/2014	7/24/2014
N012917-001E	MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	7/10/2014	7/24/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012917-001

Client Sample ID: MW-206S-059-Q3
Collection Date: 7/10/2014 9:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140715B	QC Batch: 46059			PrepDate	7/15/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	6600	67	67	mg/L	1	7/15/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	SampType	TestCode	Units	Prep Date	RunNo	Client ID	Batch ID	TestNo	Analysis Date	SeqNo	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
MB-46059	MBLK	160.1_2540C	mg/L	7/15/2014	94143	PBW	46059	SM2540C	7/15/2014	1805476	Total Dissolved Solids (Residue, Filtera	ND	10										
LCS-46059	LCS	160.1_2540C	mg/L	7/15/2014	94143	LCSW	46059	SM2540C	7/15/2014	1805477	Total Dissolved Solids (Residue, Filtera	930.000	10	1000	0	93.0	80	120					
N012914-004E-DUP	DUP	160.1_2540C	mg/L	7/15/2014	94143	ZZZZZ	46059	SM2540C	7/15/2014	1805479	Total Dissolved Solids (Residue, Filtera	311.000	10						308.0	0.969		5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-206S-059-Q3
Lab Order: N012917	Collection Date: 7/10/2014 9:40:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012917-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140717A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	24	0.011	0.67	pCi/L	1	7/17/2014 09:41 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46054	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: PBW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805270
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	ND	0.67			
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Sample ID LCS-46054	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: LCSW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805271
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	7.320	0.67	6.700	0	109 85 115
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Sample ID N012907-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805275
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	8.297	0.67	6.700	0.7250	113 75 125
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Sample ID N012907-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805276
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	8.459	0.67	6.700	0.7250	115 75 125 8.297 1.93 20
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Sample ID N012944-002A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805680
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	15.490	0.67	6.700	7.552	118 75 125
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012917-001

Client Sample ID: MW-206S-059-Q3
Collection Date: 7/10/2014 9:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716A	QC Batch: R94173				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.080	1.0		µg/L	5	7/16/2014 02:59 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46031				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/12/2014 08:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94173	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: PBW	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94173	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: LCSW	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807277						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.748	0.20	5.000	0	95.0	90	110				
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Sample ID N012945-032A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.064	0.20						5.030	0.668	20	
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Sample ID N012945-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.024	0.20	5.000	5.030	99.9	90	110				
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Sample ID N012945-032A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807284						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.029	0.20	5.000	5.030	100	90	110	10.02	0.0499	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012945-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.970	0.20	5.000	4.978	99.8	90	110				

Sample ID N012945-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.268	0.20	5.000	4.299	99.4	90	110				

Sample ID N012945-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.244	0.20	5.000	4.267	99.5	90	110				

Sample ID N012945-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.403	0.20	5.000	4.584	96.4	90	110				

Sample ID N012931-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807297						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	14.415	0.20	5.000	9.799	92.3	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012917-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807301							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.128	1.0	5.000	1.370	95.1	90	110				

Sample ID N012954-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807327							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.815	0.20	1.000	0.7914	102	90	110				

Sample ID N012954-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807329							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.568	0.20	1.000	3.611	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46031	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: PBW	Batch ID: 46031	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46031	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: LCSW	Batch ID: 46031	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.997 1.0 10.00 0 100 85 115

Sample ID N012914-018B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46031	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803704						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.116 1.0 10.00 0.7340 93.8 75 125

Sample ID N012914-018B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46031	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803705						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.962 1.0 10.00 0.7340 92.3 75 125 10.12 1.54 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012917-001

Client Sample ID: MW-206S-059-Q3
Collection Date: 7/10/2014 9:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140711A** QC Batch: **R94098** PrepDate Analyst: **PS**
Nitrate as N 4.6 0.10 1.0 mg/L 20 7/11/2014 12:45 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94098_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94098			
Client ID:	PBW	Batch ID:	R94098	TestNo:	EPA 300.0			Analysis Date:	7/11/2014	SeqNo:	1803293			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		ND		0.050										
--------------	--	----	--	-------	--	--	--	--	--	--	--	--	--	--

Sample ID	LCS-R94098_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94098			
Client ID:	LCSW	Batch ID:	R94098	TestNo:	EPA 300.0			Analysis Date:	7/11/2014	SeqNo:	1803294			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		1.027		0.050	1.000	0		103	90	110				
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Sample ID	N012919-001B-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94098			
Client ID:	ZZZZZ	Batch ID:	R94098	TestNo:	EPA 300.0			Analysis Date:	7/11/2014	SeqNo:	1803314			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		3.860		0.25						3.775		2.23	20	
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Sample ID	N012919-002B-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94098			
Client ID:	ZZZZZ	Batch ID:	R94098	TestNo:	EPA 300.0			Analysis Date:	7/11/2014	SeqNo:	1803315			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		3.830		0.25						3.915		2.19	20	
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Sample ID	N012919-001B-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94098			
Client ID:	ZZZZZ	Batch ID:	R94098	TestNo:	EPA 300.0			Analysis Date:	7/11/2014	SeqNo:	1803316			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		8.755		0.25	5.000	3.775		99.6	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012919-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803317						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.795	0.25	5.000	3.775	100	80	120	8.755	0.456	20	

Sample ID N012919-002B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.990	0.25	5.000	3.915	102	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CHAIN OF CUSTODY RECORD

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.AU.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: Preservatives: Filtered: Holding Time (days):	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C Field 28	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	1000ml Poly 4°C Field 2	1000ml Poly 4°C NA 7	2x1000ml Poly HNO3 NA 180	Cr(VI) (E218.6) FF Metals Dissolved (6020A FF) FF Cr Uranium (E200.8 FF) FF Anions (E300.0) FF NO3N TDS (SM2540C) Gross Alpha/Beta (SM7110B/E900)	Number of Containers COMMENTS
SAMPLE ID MW-206S-059-Q3	DATE 7/10/2014	TIME 0940	Matrix Water	X	X	X	X	X	X	6 JD		
TOTAL NUMBER OF CONTAINERS										6		

NO12917-1

Approved by <i>K. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/10/14 1650 7/10/14 1652 7/10/14 1652 7/10/14 1654 7/10/14 7/10/14	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / <input type="radio"/> no Airbill No: <i>3182</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/10/2014 Workorder: N012917
 Rep sample Temp (Deg C): 2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC *Alcorta* 7/11/14

Reviewed By: *fg* 07/14/14



ASSET Laboratories

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www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

11-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012917-001E / MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012917 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross A/B by 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7705 8804 6293

Relinquished by: <u>ACortez</u> 7/11/14	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B) \cdot 1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

~~B\$%&- %+\$!\$\$%8~~


For ~~NO12917-017D~~, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.0016 - 59.9021) \cdot 1000000}{15}$$

6633.33 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 6600.00 \text{ mg/L}$$


7/16/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/15/2014								TDS/CONDUCTIVITY
Date Finished: 7/16/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46059	100	60.6714	60.6717	3	1	3.00		
LCS-46059	100	61.2153	61.3083	930	1	930.00		
N012914-004E	100	60.3433	60.3741	308	1	308.00	495	0.62
N012914-004E-DUP	100	60.315	60.3461	311	1	311.00	495	0.63
N012914-005E	100	59.9065	59.9355	290	1	290.00	467	0.62
N012914-006E	100	61.0202	61.0489	287	1	287.00	469	0.61
N012914-010D	100	61.1218	61.1576	358	1	358.00	558	0.64
N012914-011E	100	61.1345	61.1717	372	1	372.00	559	0.67
N012914-012C	100	61.6767	61.7133	366	1	366.00	567	0.65
N012916-013C	100	61.3134	61.3564	430	1	430.00	685	0.63
N012916-014C	100	60.7715	60.8725	1010	1	1010.00	1419	0.71
N012917-001D	15	59.9021	60.0016	995	6.6666667	6633.33	8280	0.80
N012919-001C	100	60.8462	60.8804	342	1	342.00	739	0.46
N012919-002C	100	59.6119	59.6579	460	1	460.00	738	0.62
N012919-003C	100	60.4456	60.5294	838	1	838.00	1257	0.67
N012920-002C	60	60.8886	60.9929	1043	1.6666667	1738.33	2390	0.73
N012920-003C	65	60.5365	60.6399	1034	1.5384615	1590.77	2210	0.72

JML
7/16/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N012917-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 36.19892684 * 1 * (25/25) * 0.67 \\ &= 24.2532809848 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 24$$

 7/23/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012917
Test Method: EPA 200.8
Analysis Date: 7/15/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46054

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012907-001A-DT 5X	Uranium	pCi/L	0.739540154	NA	0.724974072	2.01%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012907-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8	Analysis Date: 7/15/2014	SeqNo: 1805274							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	15.717	1.3	13.40	0.7250	112	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012917-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.2741 * 5 \\ &= 1.3705\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.4$$

 7/23/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012917-001C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.23 * 20 \\ &= 4.6 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 4.6$$

 7/23/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012917-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.34433176677018 * 1 * (25/25) \\ &= 1.34433176677018 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.3$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012917
Test Method: EPA 6020
Analysis Date: 7/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46031

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012914-018B-DT 5X	Chromium	µg/L	0.67743178	NA	0.733982915	7.70%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012917
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012914-018B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46031	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803703							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.628	2.0	20.00	0.7340	94.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 04, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012917
Pace Project No.: 30125091

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012917
Pace Project No.: 30125091

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125091001	MW-206S-059-Q3	Water	07/10/14 09:40	07/16/14 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012917
Pace Project No.: 30125091

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125091001	MW-206S-059-Q3	EPA 900.0	JAL	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012917
Pace Project No.: 30125091

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 04, 2014

General Information:

1 sample was analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012917

Pace Project No.: 30125091

Sample: MW-206S-059-Q3 **Lab ID: 30125091001** Collected: 07/10/14 09:40 Received: 07/16/14 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	14.4 ± 18.0 (33.1) C:NA T:NA	pCi/L	07/28/14 18:57	12587-46-1	
Gross Beta	EPA 900.0	14.6 ± 14.8 (26.9) C:NA T:NA	pCi/L	07/28/14 18:57	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012917
Pace Project No.: 30125091

QC Batch:	RADC/20651	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30125091001		

METHOD BLANK:	763860	Matrix:	Water
Associated Lab Samples:	30125091001		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.037 ± 0.853 (2.23) C:NA T:NA	pCi/L	07/28/14 17:42	
Gross Beta	0.155 ± 0.686 (1.65) C:NA T:NA	pCi/L	07/28/14 17:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: N012917
Pace Project No.: 30125091

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

30125091

QC Level: Level IV

11-Jul-14

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.assetlabs.com
TEL: 7023072659 FAX: 7023072691

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests
N012917-001E / MW-206S-059-Q3	Water	7/10/2014 9:40:00 AM	32OZP	1	∞)

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012917 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross A/B by 900. CH2M-Hill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Date/Time		Date/Time	
Relinquished by:	1500	Received by:	7/16/14 ONS
Relinquished by:		Received by:	



Sample Condition Upon Receipt

Client Name: ATL

Project # 30125091

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other []

Tracking #: 770588046243

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [] Bubble Bags [] None [] Other: Foam

Thermometer Used [] Type of Ice: Wet Blue [X] None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: SRA 7/16/14

Temp should be above freezing to 6°C Comments:

Table with 16 rows of inspection items and checkboxes. Items include Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, etc. Includes handwritten notes like 'PH12' and 'SEA'.

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 7/8/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment

Analyst: JAL
Date: 7/30/2014
Worklist: 20651
Matrix: Water

Method: EPA 900.0
SOP: PGHR-001
MB Sample ID: 763860



Sample Matrix Spike Control Assessment		Gross Alpha	Gross Beta
Sample Collection Date	7/14/2014	7/14/2014	7/14/2014
Sample I.D.	30125514002	30125514002	30125514002
Sample MS I.D.	30125514002MS	30125514002MS	30125514002MS
Sample MSD I.D.			
Spike I.D.	13-048GA	13-047GB	13-047GB
MS/MSD Decay Corrected Spike Conc. (pCi/L)	64.598	84.668	84.668
Spike Volume Used in MS (mL)	0.10	0.10	0.10
Spike Volume Used in MSD (mL)			
MS Aliquot (L, g, F)	0.1502	0.1502	0.1502
MS Target Conc. (pCi/L, g, F)	43.011	43.011	56.374
MSD Aliquot (L, g, F)			
MSD Target Conc. (pCi/L, g, F)			
MS Spike uncertainty (calculated)	1.517	1.517	3.425
MSD Spike uncertainty (calculated)			
Sample Result	7.301	7.301	4.578
Sample 1.96 Sigma Unc	2.618	2.618	1.019
Sample Matrix Spike Result	48.458	48.458	66.079
Sample MS 1.96 Sigma Unc	12.408	12.408	12.718
Sample Matrix Spike Duplicate Result			
Sample MSD 1.96 Sigma Unc			
MS % Recovery	95.69%	95.69%	114.42%
MSD % Recovery			
MS Assessment	Pass	Pass	Pass
MSD Assessment			
MS/MSD Upper % Recovery Limits	121.00%	121.00%	130.00%
MS/MSD Lower % Recovery Limits	69.00%	69.00%	79.00%
Matrix Spike/Matrix Spike Duplicate Sample Assessment			

Method Blank Assessment		MDC	Critical Value	Flag	Assessment
1.96 Sig Unc.	0.8530	2.2300	0.72500		
Gross Alpha	0.1550	1.6540	0.55800		
Gross Beta					

Laboratory Control Sample Assessment		LCS	LCSD	LCS	LCSD	LCS	LCSD
Count Date:	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16		
Spike I.D.:	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB		
Spike Concentration (pCi/L)	64.598	84.582	84.582	84.582	84.582		
Volume Used (mL)	0.050	0.050	0.050	0.050	0.050		
Aliquot Volume (L, g, F)	0.204	0.204	0.203	0.203	0.203		
Target Conc. (pCi/L, g, F)	15.813	15.883	20.705	20.796	20.796		
1.96 Sigma Uncertainty (Calculated)	0.558	0.560	1.258	1.264	1.264		
Result (pCi/L, g, F)	13.964	11.808	21.671	22.990	22.990		
1.96 Sigma Unc	3.321	3.077	4.533	4.761	4.761		
% Recovery	84.51%	74.34%	104.67%	110.55%	110.55%		
Assessment	Pass	Pass	Pass	Pass	Pass		
Upper % Recovery Limits	121.00%	121.00%	130.00%	130.00%	130.00%		
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%		
Duplicate Sample Assessment							
LCS/LCSD Y or N?	Y	Y	Y	Y	Y		
Analyst:	Gross Alpha	Gross Beta					
Sample I.D.:	LCS20651	LCS20651					
Duplicate Sample I.D.	LCS20651	LCS20651					
Sample Result (pCi/L, g, F)	13.3640	21.6710					
1.96 Sigma Unc	3.3210	4.5330					
Sample Duplicate Result (pCi/L, g, F)	11.8080	22.9900					
Duplicate Sample 1.96 Sigma Unc	3.0770	4.7610					
Either results below MDC?	NO	NO					
Relative Percent Difference	12.36%	5.91%					
Assessment	Pass	Pass					
% RPD Limit	34.00%	29.00%					

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

MBT 08.5.14

July 17, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012918

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 10, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012918

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 17-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012918
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012918-001A	28-21-059-Q3	Groundwater	7/10/2014 8:46:00 AM	7/10/2014	7/17/2014
N012918-001B	28-21-059-Q3	Groundwater	7/10/2014 8:46:00 AM	7/10/2014	7/17/2014
N012918-002A	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/17/2014
N012918-002B	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/17/2014
N012918-003A	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/17/2014
N012918-003B	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/17/2014
N012918-004A	34-12-059-Q3	Groundwater	7/10/2014 10:12:00 AM	7/10/2014	7/17/2014
N012918-004B	34-12-059-Q3	Groundwater	7/10/2014 10:12:00 AM	7/10/2014	7/17/2014
N012918-005A	30E-12-059-Q3	Groundwater	7/10/2014 10:23:00 AM	7/10/2014	7/17/2014
N012918-005B	30E-12-059-Q3	Groundwater	7/10/2014 10:23:00 AM	7/10/2014	7/17/2014
N012918-006A	28-51-059-Q3	Groundwater	7/10/2014 10:49:00 AM	7/10/2014	7/17/2014
N012918-006B	28-51-059-Q3	Groundwater	7/10/2014 10:49:00 AM	7/10/2014	7/17/2014
N012918-007A	28-78-059-Q3	Groundwater	7/10/2014 11:39:00 AM	7/10/2014	7/17/2014
N012918-007B	28-78-059-Q3	Groundwater	7/10/2014 11:39:00 AM	7/10/2014	7/17/2014
N012918-008A	99-15-059-Q3	Groundwater	7/10/2014 11:49:00 AM	7/10/2014	7/17/2014
N012918-008B	99-15-059-Q3	Groundwater	7/10/2014 11:49:00 AM	7/10/2014	7/17/2014
N012918-009A	34-27-059-Q3	Groundwater	7/10/2014 12:10:00 PM	7/10/2014	7/17/2014
N012918-009B	34-27-059-Q3	Groundwater	7/10/2014 12:10:00 PM	7/10/2014	7/17/2014
N012918-010A	34-74-059-Q3	Groundwater	7/10/2014 2:07:00 PM	7/10/2014	7/17/2014
N012918-010B	34-74-059-Q3	Groundwater	7/10/2014 2:07:00 PM	7/10/2014	7/17/2014
N012918-011A	BGS-25-059-Q3	Groundwater	7/10/2014 2:10:00 PM	7/10/2014	7/17/2014
N012918-011B	BGS-25-059-Q3	Groundwater	7/10/2014 2:10:00 PM	7/10/2014	7/17/2014
N012918-012A	34-73-059-Q3	Groundwater	7/10/2014 2:17:00 PM	7/10/2014	7/17/2014
N012918-012B	34-73-059-Q3	Groundwater	7/10/2014 2:17:00 PM	7/10/2014	7/17/2014
N012918-013A	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/17/2014
N012918-013B	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/17/2014
N012918-014A	30E-05-059-Q3	Groundwater	7/10/2014 3:13:00 PM	7/10/2014	7/17/2014
N012918-014B	30E-05-059-Q3	Groundwater	7/10/2014 3:13:00 PM	7/10/2014	7/17/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-001

Client Sample ID: 28-21-059-Q3
Collection Date: 7/10/2014 8:46:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/12/2014 10:36 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/12/2014 01:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 23-28-059-Q3
Lab Order: N012918	Collection Date: 7/10/2014 9:17:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012918-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/12/2014 11:15 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/12/2014 01:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-003

Client Sample ID: 99-11-059-Q3
Collection Date: 7/10/2014 9:27:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/12/2014 11:34 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/12/2014 02:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-12-059-Q3
Lab Order: N012918	Collection Date: 7/10/2014 10:12:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012918-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/12/2014 04:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/14/2014 12:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-005

Client Sample ID: 30E-12-059-Q3
Collection Date: 7/10/2014 10:23:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/12/2014 12:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/12/2014 02:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 28-51-059-Q3
Lab Order: N012918	Collection Date: 7/10/2014 10:49:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012918-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	0.098	0.012	0.060		µg/L	1	7/15/2014 02:43 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/12/2014 12:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/12/2014 02:11 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL	Client Sample ID: 28-78-059-Q3
Lab Order: N012918	Collection Date: 7/10/2014 11:39:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012918-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/12/2014 12:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/12/2014 02:17 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-008

Client Sample ID: 99-15-059-Q3
Collection Date: 7/10/2014 11:49:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/12/2014 01:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/12/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-27-059-Q3
Lab Order: N012918	Collection Date: 7/10/2014 12:10:00 PM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012918-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 03:50 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/12/2014 01:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/12/2014 02:28 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-010

Client Sample ID: 34-74-059-Q3
Collection Date: 7/10/2014 2:07:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/12/2014 02:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	7/12/2014 02:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-011

Client Sample ID: BGS-25-059-Q3
Collection Date: 7/10/2014 2:10:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/12/2014 02:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/12/2014 02:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-012

Client Sample ID: 34-73-059-Q3
Collection Date: 7/10/2014 2:17:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 04:11 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/12/2014 02:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/12/2014 02:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 17-Jul-14

CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-013

Client Sample ID: 36-31-059-Q3
Collection Date: 7/10/2014 2:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/12/2014 03:06 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/12/2014 03:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012918-014

Client Sample ID: 30E-05-059-Q3
Collection Date: 7/10/2014 3:13:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140712A	QC Batch: R94136				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/12/2014 03:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/12/2014 03:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94144	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: PBW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805549
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94144	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: LCSW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805550
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.202	0.060	0.2000	0	101 90 110
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Sample ID N012914-016ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805552
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.016	0.060			0.01821 0 20
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Sample ID N012914-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805554
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.216	0.060	0.2000	0.03243	91.8 90 110
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Sample ID N012914-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805555
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.204	0.060	0.2000	0.01821	93.1 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012914-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.389	0.060	0.2000	0.1831	103	90	110				

Sample ID N012914-025AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805558						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.374	0.060	0.2000	0.1831	95.3	90	110	0.3887	3.95	20	

Sample ID N012914-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.250	0.060	0.2000	0.04395	103	90	110				

Sample ID N012916-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0.01297	97.0	90	110				

Sample ID N012916-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01744	95.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012916-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01292	102	90	110				

Sample ID N012918-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.294	0.060	0.2000	0.09825	97.7	90	110				

Sample ID N012918-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805574						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01296	95.9	90	110				

Sample ID N012918-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805576						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02054	97.8	90	110				

Sample ID N012929-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01779	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012929-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805580						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01747	101	90	110				

Sample ID N012929-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805584						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.6	90	110				

Sample ID N012929-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01301	98.6	90	110				

Sample ID N012929-032AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805588						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01650	97.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94136	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: PBW	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804794						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94136	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: LCSW	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804795						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.968	0.20	5.000	0	99.4	90	110				
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Sample ID N012918-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804797						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.118	0.20						3.124	0.170	20	
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Sample ID N012918-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804798						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.089	0.20	1.000	3.124	96.5	90	110				
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Sample ID N012918-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804799						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.077	0.20	1.000	3.124	95.4	90	110	4.089	0.282	20	
---------------------	-------	------	-------	-------	------	----	-----	-------	-------	----	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012918-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804801						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.785	0.20	1.000	1.808	97.6	90	110				

Sample ID N012918-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804803						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.833	0.20	1.000	1.860	97.3	90	110				

Sample ID N012918-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.674	0.20	1.000	1.612	106	90	110				

Sample ID N012918-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804809						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.080	0.20	1.000	0.08950	99.0	90	110				

Sample ID N012918-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804811						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.407	0.20	1.000	1.441	96.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012918-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.453	0.20	1.000	1.455	99.8	90	110				

Sample ID N012918-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804815						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.980	0.20	1.000	0	98.0	90	110				

Sample ID N012918-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.571	0.20	1.000	1.563	101	90	110				

Sample ID N012918-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804821						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.977	0.20	1.000	1.968	101	90	110				

Sample ID N012918-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804823						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0.01640	99.3	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012918-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 2.287 0.20 1.000 1.268 102 90 110

Sample ID N012918-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 2.880 0.20 1.000 1.856 102 90 110

Sample ID N012918-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 2.701 0.20 1.000 1.682 102 90 110

Sample ID N012914-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804835						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 4.144 0.20 1.000 3.176 96.8 90 110

Sample ID N012914-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6		Analysis Date: 7/12/2014	SeqNo: 1804837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 4.129 0.20 1.000 3.113 102 90 110

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012914-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1804839							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				

Sample ID N012914-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1804843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.188	0.20	1.000	0.1808	101	90	110				

Sample ID N012914-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94136						
Client ID: ZZZZZZ	Batch ID: R94136	TestNo: EPA 218.6	Analysis Date: 7/12/2014	SeqNo: 1804845							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0.02100	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46029	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: PBW	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803640						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46029	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: LCSW	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803641						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.354 1.0 10.00 0 104 85 115

Sample ID N012918-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.216 1.0 10.00 2.911 93.1 75 125

Sample ID N012918-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.239 1.0 10.00 2.911 93.3 75 125 12.22 0.191 20

Qualifiers:

- | | | |
|---|--|--|
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Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46039	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46039	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.272 1.0 10.00 0 103 85 115

Sample ID N012930-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804940						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.365 1.0 10.00 0.2046 102 75 125

Sample ID N012930-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804941						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.222 1.0 10.00 0.2046 100 75 125 10.37 1.39 20

Qualifiers:

- | | | |
|---|--|--|
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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C Filtered: Field Field Holding Time (days): 28 180		CR(V) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix					
28-21-059-Q3	7/10/14	0846	GW	X	X	NO12918-1 ↓ -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14	2	Barrazza
23-28-059-Q3	7/10/14	0917	GW	X	X		2	Ally
99-11-059-Q3	7/10/14	0927	GW	X	X		2	
34-12-059-Q3	7/10/14	1012	GW	X	X		2	Trentecoste
30E-12-059-Q3	7/10/14	1023	GW	X	X		2	Wright
28-51-059-Q3	7/10/14	1049	GW	X	X		2	Lucas
28-78-059-Q3	7/10/14	1139	GW	X	X		2	Myers
99-15-059-Q3	7/10/14	1149	GW	X	X		2	
34-27-059-Q3	7/10/14	1210	GW	X	X		2	Hill
34-74-059-Q3	7/10/14	1407	GW	X	X		2	Hensley
BGS-25-059-Q3	7/10/14	1410	GW	X	X		2	Gutierrez
34-73-059-Q3	7/10/14	1417	GW	X	X		2	Hensley
36-31-059-Q3	7/10/14	1445	GW	X	X		2	Roberts
30E-05-059-Q3	7/10/14	1513	GW	X	X		2	Evans
TOTAL NUMBER OF CONTAINERS							28	

Approved by <i>H. Blinn</i> Sampled by <i>Spencer Doolittle</i> Relinquished by <i>SD</i> Received by <i>Duralay</i> Relinquished by <i>Spencer Doolittle</i> Received by <i>Spencer Doolittle</i>	Signatures Date/Time 7/10/14 1550 7/10/14 1600 7/10/14 1600 7/10/14 1630 7/10/14 2015 7/10/14	Shipping Details Method of Shipment: On Ice: (yes) / no 3-20 Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/10/2014 Workorder: N012918
 Rep sample Temp (Deg C): 3.2 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input type="checkbox"/>
NA <input type="checkbox"/> |

Comments Sample named 34-12-059-Q3 was not received. See email.

Checklist Completed B AC *AlCortez* 7/11/14

Reviewed By: *Nancy* 7/17/2014

amanda.cortes@assetlaboratories.com

From: Marlon B. Cartin [marlon@assetlaboratories.com]
Sent: Friday, July 11, 2014 1:29 PM
To: Katherine.Blinn@ch2m.com
Cc: Jim.Hanvey@CH2M.com; 'amanda cortes'
Subject: RE: Missing DOM sample

Thanks Katherine.

Marlon B. Cartin

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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From: Katherine.Blinn@ch2m.com [<mailto:Katherine.Blinn@ch2m.com>]
Sent: Friday, July 11, 2014 11:47 AM
To: marlon@assetlaboratories.com
Cc: Jim.Hanvey@CH2M.com
Subject: RE: Missing DOM sample

Hi Marlon,

Phil just picked up the missing sample a few minutes ago.

Katherine A.T. Blinn, E.I.T.

From: Marlon B. Cartin [<mailto:marlon@assetlaboratories.com>]
Sent: Friday, July 11, 2014 11:46 AM
To: Blinn, Katherine/NJO
Cc: Hanvey, Jim/BAO
Subject: FW: Missing DOM sample

Hi Katherine!

Forwarding email about missing samples for Domestic.

Thanks,

Marlon B. Cartin

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

www.assetlaboratories.com



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Thank you.

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]

Sent: Friday, July 11, 2014 11:38 AM

To: 'Marlon B. Cartin'

Cc: 'ASSET, Inc. Sample Control'

Subject: Missing DOM sample

Marlon,

We did not receive one set of samples for DOM project. The sample is named 34-12-059-Q3, however, it is on the COC. Please reference the attached COC.

Thank you,

Amanda M. Cortes

Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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Thank you.

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012918-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.09825 * 1 \\ &= 0.09825\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.098}$$

Nancy

7/16/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012918-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 3.1236 * 1 \\ &= 3.1236\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 3.1$$

Money 7/16/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012918-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.91104745639337 * 1 * (25/25) \\ &= 2.91104745639337 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.9$$



7/16/2014

CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012918-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.270	2.0	20.00	2.911	96.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012918
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012930-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.064	2.0	20.00	0.2046	99.3	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012918
Test Method: EPA 6020
Analysis Date: 7/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46029

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012918-001B-DT 5X	Chromium	µg/L	2.894029198	NA	2.911047456	0.58%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012918
Test Method: EPA 6020
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46039

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012930-001B-DT 5X	Chromium	µg/L	0.213502	NA	0.204629	4.34%	10

Note: NA - Not applicable

July 24, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303

FAX: (530) 339-3303

CA-ELAP 2676
NV Cert. No.: NV-00922

Workorder No.: N012919

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 10, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012919

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012919
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012919-001A	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/24/2014
N012919-001B	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/24/2014
N012919-001C	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/24/2014
N012919-001D	23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	7/10/2014	7/24/2014
N012919-002A	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/24/2014
N012919-002B	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/24/2014
N012919-002C	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/24/2014
N012919-002D	99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	7/10/2014	7/24/2014
N012919-003A	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/24/2014
N012919-003B	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/24/2014
N012919-003C	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/24/2014
N012919-003D	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/24/2014
N012919-003E	36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	7/10/2014	7/24/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 23-28-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 9:17:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140715B	QC Batch: 46059			PrepDate	7/15/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	340	10	10	mg/L	1	7/15/2014 01:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** 99-11-059-Q3
Lab Order: N012919 **Collection Date:** 7/10/2014 9:27:00 AM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012919-002

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140715B** QC Batch: **46059** PrepDate: **7/15/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 460 10 10 mg/L 1 7/15/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-31-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 2:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140715B	QC Batch: 46059			PrepDate	7/15/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	840	10	10	mg/L	1	7/15/2014 01:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46059	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: PBW	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805476						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera ND 10

Sample ID LCS-46059	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: LCSW	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 930.000 10 1000 0 93.0 80 120

Sample ID N012914-004E-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/15/2014	RunNo: 94143						
Client ID: ZZZZZ	Batch ID: 46059	TestNo: SM2540C		Analysis Date: 7/15/2014	SeqNo: 1805479						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera 311.000 10 308.0 0.969 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 23-28-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 9:17:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	8.5	0.011	0.67	pCi/L	1	7/15/2014 06:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-11-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 9:27:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	8.7	0.011	0.67	pCi/L	1	7/15/2014 06:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-31-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 2:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	19	0.011	0.67	pCi/L	1	7/15/2014 06:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46054	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140						
Client ID: PBW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	ND	0.67									

Sample ID LCS-46054	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140						
Client ID: LCSW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805271						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	7.320	0.67	6.700	0	109	85	115				

Sample ID N012907-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805275						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	8.297	0.67	6.700	0.7250	113	75	125				

Sample ID N012907-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	8.459	0.67	6.700	0.7250	115	75	125	8.297	1.93	20	

Sample ID N012944-002A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	15.490	0.67	6.700	7.552	118	75	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 23-28-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 9:17:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098			PrepDate		Analyst: PS
Nitrate as N	3.8	0.026	0.25	mg/L	5	7/11/2014 03:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-11-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 9:27:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140711A	QC Batch: R94098			PrepDate		Analyst: PS
Nitrate as N	3.9	0.026	0.25	mg/L	5	7/11/2014 04:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** 36-31-059-Q3
Lab Order: N012919 **Collection Date:** 7/10/2014 2:45:00 PM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012919-003

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140711A** QC Batch: **R94098** PrepDate Analyst: **PS**
Nitrate as N 15 0.10 1.0 mg/L 20 7/11/2014 04:20 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94098_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098
Client ID: PBW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803293
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N ND 0.050

Sample ID LCS-R94098_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098
Client ID: LCSW	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803294
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 1.027 0.050 1.000 0 103 90 110

Sample ID N012919-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803314
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 3.860 0.25 3.775 2.23 20

Sample ID N012919-002B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803315
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 3.830 0.25 3.915 2.19 20

Sample ID N012919-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098
Client ID: ZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803316
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 8.755 0.25 5.000 3.775 99.6 80 120

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012919-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803317						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.795	0.25	5.000	3.775	100	80	120	8.755	0.456	20	

Sample ID N012919-002B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94098						
Client ID: ZZZZZZ	Batch ID: R94098	TestNo: EPA 300.0		Analysis Date: 7/11/2014	SeqNo: 1803318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.990	0.25	5.000	3.915	102	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-31-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 2:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/15/2014 10:38 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94138	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: PBW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804875
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94138	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: LCSW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804876
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.681 1.0 10.00 0 107 85 115

Sample ID N012929-009D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804877
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.396 1.0 10.00 0.5304 98.7 75 125

Sample ID N012929-009D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804878
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.331 1.0 10.00 0.5304 98.0 75 125 10.40 0.633 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 36-31-059-Q3
Lab Order: N012919	Collection Date: 7/10/2014 2:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012919-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 12:27 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46041	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: PBW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804518
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46041	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: LCSW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804519
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.112 0.020 0.1000 0 112 85 115

Sample ID N012916-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804523
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125

Sample ID N012916-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804524
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125 0.1008 0.397 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012919
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012919-003

Client Sample ID: 36-31-059-Q3
Collection Date: 7/10/2014 2:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46031			PrepDate	7/12/2014	Analyst: CEI
Arsenic	2.0	0.027	0.10	µg/L	1	7/12/2014 08:42 PM
Manganese	ND	0.026	0.50	µg/L	1	7/12/2014 08:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46031	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: PBW	Batch ID: 46031	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803562
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46031	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: LCSW	Batch ID: 46031	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803563
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.456	0.10	10.00	0	105 85 115
Manganese	102.898	0.50	100.0	0	103 85 115

Sample ID N012914-018B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: ZZZZZ	Batch ID: 46031	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803567
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	39.779	0.10	10.00	30.84	89.4 75 125
Manganese	107.039	0.50	100.0	9.126	97.9 75 125

Sample ID N012914-018B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101
Client ID: ZZZZZ	Batch ID: 46031	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/12/2014	SeqNo: 1803568
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	39.119	0.10	10.00	30.84	82.8 75 125 39.78 1.67 20
Manganese	104.907	0.50	100.0	9.126	95.8 75 125 107.0 2.01 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492584.JR.AU Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 500 ml Poly HNO3, 4°C Preservatives: 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C 2x1000 ml Poly HNO3	Number of Containers	COMMENTS	
Filtered: Holding Time (days):	Field Field Field Field NA NA NA 180 180 180 2 7 28 180	Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As,Mn Uranium (E200.8FF) FF Anions (E300.0) FF NO3N TDS (SM2540C) TOC (E5310) Gross Alpha/Beta (SM7110B/E900)					
SAMPLE ID DATE TIME Matrix							
23-28-059-Q3	7/10/14	0917	GW	X X X X X	NO12919-1 ↓ -2 -3	5	Ally
99-11-059-Q3	7/10/14	0927	GW	X X X X X		5	
36-31-059-Q3	7/10/14	1445	GW	X X X X X X X		8	Roberts
				TOTAL NUMBER OF CONTAINERS		18	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/10/14 1550 7/10/14 1600 7/10/14 1600 7/10/14 1630 7/10/14 2015 7/10/14	Shipping Details Method of Shipment: On Ice: (yes) / no 3-30 Airbill No: 1842 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/10/2014 Workorder: N012919
 Rep sample Temp (Deg C): 3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC Alcort 7/11/14

Reviewed By:

gog 07/14/14



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TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Spencer Doolittle

11-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012919-001D / 23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	32OZP	1		
N012919-002D / 99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	32OZP	1		
N012919-003D / 36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012919 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross A/B by 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7705 8804 6293

Relinquished by: <u>ACortez</u> 7/11/14	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012919-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.8804-60.8460)*1000000}{100}$$

342 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 340.00 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/15/2014								TDS/CONDUCTIVITY
Date Finished: 7/16/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46059	100	60.6714	60.6717	3	1	3.00		
LCS-46059	100	61.2153	61.3083	930	1	930.00		
N012914-004E	100	60.3433	60.3741	308	1	308.00	495	0.62
N012914-004E-DUP	100	60.315	60.3461	311	1	311.00	495	0.63
N012914-005E	100	59.9065	59.9355	290	1	290.00	467	0.62
N012914-006E	100	61.0202	61.0489	287	1	287.00	469	0.61
N012914-010D	100	61.1218	61.1576	358	1	358.00	558	0.64
N012914-011E	100	61.1345	61.1717	372	1	372.00	559	0.67
N012914-012C	100	61.6767	61.7133	366	1	366.00	567	0.65
N012916-013C	100	61.3134	61.3564	430	1	430.00	685	0.63
N012916-014C	100	60.7715	60.8725	1010	1	1010.00	1419	0.71
N012917-001D	15	59.9021	60.0016	995	6.6666667	6633.33	8280	0.80
N012919-001C	100	60.8462	60.8804	342	1	342.00	739	0.46
N012919-002C	100	59.6119	59.6579	460	1	460.00	738	0.62
N012919-003C	100	60.4456	60.5294	838	1	838.00	1257	0.67
N012920-002C	60	60.8886	60.9929	1043	1.6666667	1738.33	2390	0.73
N012920-003C	65	60.5365	60.6399	1034	1.5384615	1590.77	2210	0.72

Jmer
7/16/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012919-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 12.6945358043651 * 1 * (25/25) * 0.67 \\ &= 8.50533898892462 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 8.5$$

Nancy 7/23/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012919
Test Method: EPA 200
Analysis Date: 7/15/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46054

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012907-001A-DT 5X	Uranium	pCi/L	0.739540154	NA	0.724974072	2.01%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012907-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8	Analysis Date: 7/15/2014	SeqNo: 1805274							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	15.717	1.3	13.40	0.7250	112	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012919-003B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.767 * 20 \\ &= 15.34 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 15$$

 7/23/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012919-003E**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.93120] [1] - 0.05580$$

$$\text{TOC} = 0.87540$$

Reporting results in two significant figures,

$$\text{TOC} = 0.88 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 7/23/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012919-003A**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.01444114389 * 1 * (25/25) \\ &= 0.01444114389 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Iron, mg/L} = 0.014$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012919
Test Method: EPA 6010
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46041

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012916-002B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012916-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94121						
Client ID: ZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804522							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	5.078	0.040	5.000	0	102	80	120				
------	-------	-------	-------	---	-----	----	-----	--	--	--	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012919-003A**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 2.041688115 * 1 * (25/25) \\ &= 2.041688115 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 2.0$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012919
Test Method: EPA 6020
Analysis Date: 7/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46031

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Mn. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012914-018B-DT 5X	Arsenic	µg/L	30.76217204	PASS	30.8421461	0.26%	10
N012914-018B-DT 5X	Manganese	µg/L	9.095772759	NA	9.126468502	0.34%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012919
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012914-018B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46031	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	51.314	0.20	20.00	30.84	102	80	120				
Manganese	203.390	1.0	200.0	9.126	97.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 04, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012919
Pace Project No.: 30125090

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012919
Pace Project No.: 30125090

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125090001	23-28-059-Q3	Water	07/10/14 09:17	07/16/14 09:15
30125090002	99-11-059-Q3	Water	07/10/14 09:27	07/16/14 09:15
30125090003	36-31-059-Q3	Water	07/10/14 14:45	07/16/14 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012919
Pace Project No.: 30125090

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125090001	23-28-059-Q3	EPA 900.0	JAL	2
30125090002	99-11-059-Q3	EPA 900.0	JAL	2
30125090003	36-31-059-Q3	EPA 900.0	JAL	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012919
Pace Project No.: 30125090

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 04, 2014

General Information:

3 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012919
Pace Project No.: 30125090

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	12.5 ± 3.68 (3.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-46-1	
Gross Beta		EPA 900.0	3.03 ± 1.66 (4.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	11.4 ± 3.46 (3.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-46-1	
Gross Beta		EPA 900.0	3.33 ± 1.54 (4.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	19.4 ± 4.45 (3.00) C:NA T:NA	pCi/L	07/29/14 18:57	12587-46-1	
Gross Beta		EPA 900.0	5.32 ± 1.63 (4.00) C:NA T:NA	pCi/L	07/29/14 18:57	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.assetlabs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

30125090

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: Spencer Doolittle

11-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012919-001D / 23-28-059-Q3	Groundwater	7/10/2014 9:17:00 AM	32OZP	1		001
N012919-002D / 99-11-059-Q3	Groundwater	7/10/2014 9:27:00 AM	32OZP	1		002
N012919-003D / 36-31-059-Q3	Groundwater	7/10/2014 2:45:00 PM	32OZP	1		003

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012919 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross A/B by 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7705 8804 6293

Relinquished by: <i>Marlon</i>	Date/Time: 7/11/14	Relinquished by: <i>Scott Doolittle</i>	Date/Time: 7-16-14 0915
Relinquished by:	Date/Time: 1500	Received by:	Date/Time:



Sample Condition Upon Receipt

30125090

Client Name: ATL

Project #

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 770588046243

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [] Bubble Bags [] None [] Other: Foam

Thermometer Used [] Type of Ice: Wet Blue [X] None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: SRA 7/18/14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of checklist items and checkboxes. Items include Chain of Custody Present, Samples Arrived within Hold Time, Short Hold Time Analysis, etc.

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature] Date: 7/18/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Project Number: **30125090**

Client Name: **ATL**



Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 (1L))	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other	
001	1M																								
002	1M																								

Quality Control Sample Performance Assessment

Analyst: JAL
Date: 7/30/2014
Worklist: 20651
Matrix: Water

Method: EPA 900.0
SOP: PGHR-001
MB Sample ID: 763860



Method Blank Assessment		1.96 Sig Unc.		MDC	Critical Value	Flag	Assessment
Gross Alpha	Activity	-0.0370	0.8530	2.2300	0.72500		
Gross Beta	Activity	0.1550	0.6860	1.6540	0.55800		

Laboratory Control Sample Assessment		Gross Alpha		Gross Beta	
Analyte	Count Date	LCS	LCSD	LCS	LCSD
Spike Concentration (pCi/L)	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16
Volume Used (mL)	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB
Aliquot Volume (L, g, F)	64.598	64.598	84.582	84.582	84.582
Target Conc. (pCi/L, g, F)	0.050	0.050	0.050	0.050	0.050
1.96 Sigma Uncertainty (Calculated)	15.813	15.883	20.705	20.796	20.796
Result (pCi/L, g, F)	0.558	0.560	1.258	1.264	1.264
% Recovery	11.808	11.808	21.671	22.980	22.980
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	130.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%

Duplicate Sample Assessment		Gross Alpha		Gross Beta	
Analyte	Count Date	LCS	LCSD	LCS	LCSD
Duplicate Sample 1.96 Sigma Unc.	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16
Sample Result (pCi/L, g, F)	13.364	13.364	3.077	4.533	4.761
Relative Percent Difference	84.51%	74.34%	104.67%	110.55%	110.55%
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	130.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%

Sample Matrix Spike Control Assessment		Gross Alpha		Gross Beta	
Analyte	Count Date	LCS	LCSD	LCS	LCSD
Sample 1.96 Sigma Unc.	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014
Sample Result (pCi/L, g, F)	30125514002MS	30125514002MS	30125514002MS	30125514002MS	30125514002MS
Relative Percent Difference	MS/MSD	MS/MSD	MS/MSD	MS/MSD	MS/MSD
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	130.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%

Duplicate Sample Assessment		Gross Alpha		Gross Beta	
Analyte	Count Date	LCS	LCSD	LCS	LCSD
Duplicate Sample 1.96 Sigma Unc.	7/14/2014	7/14/2014	7/14/2014	7/14/2014	7/14/2014
Sample Result (pCi/L, g, F)	13.364	13.364	3.077	4.533	4.761
Relative Percent Difference	84.51%	74.34%	104.67%	110.55%	110.55%
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	130.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

WBT 08.5.14

July 25, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012928

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 11, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012928

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012928
Contract No: 2014-GMP-060-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012928-001A	EX-36-060-M07	Groundwater	7/10/2014 1:15:00 PM	7/11/2014	7/25/2014
N012928-001B	EX-36-060-M07	Groundwater	7/10/2014 1:15:00 PM	7/11/2014	7/25/2014



CLIENT: CH2M HILL
Lab Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012928-001

Client Sample ID: EX-36-060-M07
Collection Date: 7/10/2014 1:15:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/14/2014 10:37 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140712A	QC Batch: 46029				PrepDate	7/12/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/12/2014 03:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
 Work Order: N012928
 Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R94152	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94152			
Client ID:	PBW	Batch ID:	R94152	TestNo:	EPA 218.6			Analysis Date:	7/14/2014	SeqNo:	1805980			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		ND		0.20										

Sample ID	LCS-R94152	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94152			
Client ID:	LCSW	Batch ID:	R94152	TestNo:	EPA 218.6			Analysis Date:	7/14/2014	SeqNo:	1805981			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		5.077		0.20	5.000	0		102	90	110				

Sample ID	N012928-001A-DUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94152			
Client ID:	ZZZZZ	Batch ID:	R94152	TestNo:	EPA 218.6			Analysis Date:	7/14/2014	SeqNo:	1806003			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		1.723		0.20							1.788	3.71	20	

Sample ID	N012928-001A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94152			
Client ID:	ZZZZZ	Batch ID:	R94152	TestNo:	EPA 218.6			Analysis Date:	7/14/2014	SeqNo:	1806004			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		2.731		0.20	1.000	1.788		94.3	90	110				

Sample ID	N012929-003A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94152			
Client ID:	ZZZZZ	Batch ID:	R94152	TestNo:	EPA 218.6			Analysis Date:	7/14/2014	SeqNo:	1806005			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		1.079		0.20	1.000	0		108	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.604	0.20	1.000	0.5133	109	90	110				

Sample ID N012929-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.025	0.20	1.000	0	102	90	110				

Sample ID N012929-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806008						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.635	0.20	1.000	1.600	104	90	110				

Sample ID N012929-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID N012929-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806012						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.034	0.20	1.000	0	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.041	0.20	1.000	0	104	90	110				

Sample ID N012929-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Sample ID N012929-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N012929-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806016						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.155	0.20	1.000	0.2301	92.5	90	110				

Sample ID N012929-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806017						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.067	0.20	1.000	0	107	90	110				

Sample ID N012929-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.096	0.20	1.000	0	110	90	110				

Sample ID N012929-019A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.041	0.20	1.000	0	104	90	110	1.096	5.15	20	

Sample ID N012929-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.241	0.20	1.000	0.2812	96.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46029	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: PBW	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803640						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46029	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: LCSW	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803641						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.354 1.0 10.00 0 104 85 115

Sample ID N012918-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.216 1.0 10.00 2.911 93.1 75 125

Sample ID N012918-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/12/2014	RunNo: 94101						
Client ID: ZZZZZZ	Batch ID: 46029	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.239 1.0 10.00 2.911 93.3 75 125 12.22 0.191 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Please revise the COC as indicated below.

K. Blain

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-060-M07 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly Preservatives: (NH4)2 SO4, NH4 OH, 4°C Filtered: Field Field Holding Time (days): 28 180	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers COMMENTS		
SAMPLE ID	DATE	TIME	Matrix					
EX-36-060-M07	7/10/13 ¹⁴	13:15	GW	✓			N012928-1	
EX-36-060-M07	7/10/13 ¹⁴	13:15	GW		✓		↓ -1	
							TOTAL NUMBER OF CONTAINERS	2

Approved by <u>D. Kouali</u> Sampled by <u>D. Kouali</u> Relinquished by <u>D. Kouali</u> Received by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u>	Signatures Date/Time 7/10/13 13:30 7/10/13 13:30 7/10/13 13:30 7/11/14 @ 11:45 7/11/14 17:05	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3-906 Airbill No: <u>1842</u> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/11/2014 Workorder: N012928
 Rep sample Temp (Deg C): 3.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input type="checkbox"/>
NA <input type="checkbox"/> |

Comments Collection year on the COC and sample bottle was 2013. Logged as 2014.

Checklist Completed B

AC  7/14/14

Reviewed By:

 07/17/14

Sample Control

From: Katherine.Blinn@ch2m.com
Sent: Monday, July 14, 2014 4:32 PM
To: amanda.cortes@assetlaboratories.com
Cc: marlon@atl-labs.com; samplecontrol.lv@assetlaboratories.com; Jim.Hanvey@CH2M.com; dkovall@eticeng.com
Subject: RE: 2014-GMP-060-MO7
Attachments: COC_ETIC_Revised.pdf

Hi Amanda,

Please see the revised COC (attached) for corrections.

Thanks.

Katherine A.T. Blinn, E.I.T.

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Monday, July 14, 2014 3:48 PM
To: Blinn, Katherine/NJO
Cc: 'Marlon Cartin'; 'ASSET, Inc. Sample Control'; Hanvey, Jim/BAO
Subject: 2014-GMP-060-MO7

Hello, Katherine.

The sample for the above project has a collection year of 2013. Sample containers also say 7/10/2013. Please reference attached COC.

Thank you,

Amanda M. Cortes

Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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Thank you.

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012928-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.7884 * 1 \\ &= 1.7884\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.8$$

 7/25/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012928-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.7045354081823 * 1 * (25/25) \\ &= 1.7045354081823 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.7$$

 7/25/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012928
Test Method: EPA 6020
Analysis Date: 7/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46029

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012918-001B-DT 5X	Chromium	µg/L	2.894029198	NA	2.911047456	0.58%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012928
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012918-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94101						
Client ID: ZZZZZ	Batch ID: 46029	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/12/2014	SeqNo: 1803644							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.270	2.0	20.00	2.911	96.8	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 28, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012929

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 11, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protom, Missouri.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on QC samples N012929-011B-MS and N012929-011B-MSD are outside recovery criteria for Iron since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) on QC sample N012929-019B-MS is outside recovery criteria for Manganese possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 28-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012929-001A	CA-MW-204D-059b-Q3	Water	7/11/2014 9:04:00 AM	7/11/2014	7/28/2014
N012929-001B	CA-MW-204D-059b-Q3	Water	7/11/2014 9:04:00 AM	7/11/2014	7/28/2014
N012929-001C	CA-MW-204D-059b-Q3	Water	7/11/2014 9:04:00 AM	7/11/2014	7/28/2014
N012929-001D	CA-MW-204D-059b-Q3	Water	7/11/2014 9:04:00 AM	7/11/2014	7/28/2014
N012929-002A	MW-923-059b-Q3	Water	7/11/2014 8:56:00 AM	7/11/2014	7/28/2014
N012929-002B	MW-923-059b-Q3	Water	7/11/2014 8:56:00 AM	7/11/2014	7/28/2014
N012929-002C	MW-923-059b-Q3	Water	7/11/2014 8:56:00 AM	7/11/2014	7/28/2014
N012929-002D	MW-923-059b-Q3	Water	7/11/2014 8:56:00 AM	7/11/2014	7/28/2014
N012929-003A	CA-MW-204S-059b-Q3	Water	7/11/2014 9:06:00 AM	7/11/2014	7/28/2014
N012929-003B	CA-MW-204S-059b-Q3	Water	7/11/2014 9:06:00 AM	7/11/2014	7/28/2014
N012929-003C	CA-MW-204S-059b-Q3	Water	7/11/2014 9:06:00 AM	7/11/2014	7/28/2014
N012929-003D	CA-MW-204S-059b-Q3	Water	7/11/2014 9:06:00 AM	7/11/2014	7/28/2014
N012929-004A	CA-MW-303D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-004B	CA-MW-303D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-005A	CA-MW-307D-059b-Q3	Water	7/11/2014 11:21:00 AM	7/11/2014	7/28/2014
N012929-005B	CA-MW-307D-059b-Q3	Water	7/11/2014 11:21:00 AM	7/11/2014	7/28/2014
N012929-006A	MW-747-059b-Q3	Water	7/11/2014 11:40:00 AM	7/11/2014	7/28/2014
N012929-007A	MW-78D-059b-Q3	Water	7/11/2014 11:36:00 AM	7/11/2014	7/28/2014
N012929-007B	MW-78D-059b-Q3	Water	7/11/2014 11:36:00 AM	7/11/2014	7/28/2014
N012929-007C	MW-78D-059b-Q3	Water	7/11/2014 11:36:00 AM	7/11/2014	7/28/2014
N012929-008A	MW-748-059b-Q3	Water	7/11/2014 11:55:00 AM	7/11/2014	7/28/2014
N012929-009A	SA-SM-01D-059b-Q3	Water	7/11/2014 9:24:00 AM	7/11/2014	7/28/2014
N012929-009B	SA-SM-01D-059b-Q3	Water	7/11/2014 9:24:00 AM	7/11/2014	7/28/2014
N012929-009C	SA-SM-01D-059b-Q3	Water	7/11/2014 9:24:00 AM	7/11/2014	7/28/2014
N012929-009D	SA-SM-01D-059b-Q3	Water	7/11/2014 9:24:00 AM	7/11/2014	7/28/2014
N012929-010A	SA-SM-01S-059b-Q3	Water	7/11/2014 8:44:00 AM	7/11/2014	7/28/2014
N012929-010B	SA-SM-01S-059b-Q3	Water	7/11/2014 8:44:00 AM	7/11/2014	7/28/2014
N012929-010C	SA-SM-01S-059b-Q3	Water	7/11/2014 8:44:00 AM	7/11/2014	7/28/2014
N012929-010D	SA-SM-01S-059b-Q3	Water	7/11/2014 8:44:00 AM	7/11/2014	7/28/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012929-011A	SA-SM-02D-059b-Q3	Water	7/11/2014 10:57:00 AM	7/11/2014	7/28/2014
N012929-011B	SA-SM-02D-059b-Q3	Water	7/11/2014 10:57:00 AM	7/11/2014	7/28/2014
N012929-011C	SA-SM-02D-059b-Q3	Water	7/11/2014 10:57:00 AM	7/11/2014	7/28/2014
N012929-011D	SA-SM-02D-059b-Q3	Water	7/11/2014 10:57:00 AM	7/11/2014	7/28/2014
N012929-012A	SA-SM-02S-059b-Q3	Water	7/11/2014 10:21:00 AM	7/11/2014	7/28/2014
N012929-012B	SA-SM-02S-059b-Q3	Water	7/11/2014 10:21:00 AM	7/11/2014	7/28/2014
N012929-012C	SA-SM-02S-059b-Q3	Water	7/11/2014 10:21:00 AM	7/11/2014	7/28/2014
N012929-012D	SA-SM-02S-059b-Q3	Water	7/11/2014 10:21:00 AM	7/11/2014	7/28/2014
N012929-013A	SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	7/11/2014	7/28/2014
N012929-013B	SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	7/11/2014	7/28/2014
N012929-013C	SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	7/11/2014	7/28/2014
N012929-013D	SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	7/11/2014	7/28/2014
N012929-013E	SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	7/11/2014	7/28/2014
N012929-014A	SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	7/11/2014	7/28/2014
N012929-014B	SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	7/11/2014	7/28/2014
N012929-014C	SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	7/11/2014	7/28/2014
N012929-014D	SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	7/11/2014	7/28/2014
N012929-014E	SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	7/11/2014	7/28/2014
N012929-015A	MW-749-059b-Q3	Water	7/11/2014 11:37:00 AM	7/11/2014	7/28/2014
N012929-016A	SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	7/11/2014	7/28/2014
N012929-016B	SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	7/11/2014	7/28/2014
N012929-016C	SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	7/11/2014	7/28/2014
N012929-016D	SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	7/11/2014	7/28/2014
N012929-016E	SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	7/11/2014	7/28/2014
N012929-017A	SA-SM-04D-059b-Q3	Water	7/11/2014 8:33:00 AM	7/11/2014	7/28/2014
N012929-018A	MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	7/11/2014	7/28/2014
N012929-018B	MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	7/11/2014	7/28/2014
N012929-018C	MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	7/11/2014	7/28/2014
N012929-018D	MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	7/11/2014	7/28/2014
N012929-018E	MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	7/11/2014	7/28/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012929-019A	SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	7/11/2014	7/28/2014
N012929-019B	SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	7/11/2014	7/28/2014
N012929-019C	SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	7/11/2014	7/28/2014
N012929-019D	SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	7/11/2014	7/28/2014
N012929-019E	SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	7/11/2014	7/28/2014
N012929-020A	CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	7/11/2014	7/28/2014
N012929-020B	CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	7/11/2014	7/28/2014
N012929-020C	CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	7/11/2014	7/28/2014
N012929-020D	CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	7/11/2014	7/28/2014
N012929-020E	CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	7/11/2014	7/28/2014
N012929-021A	MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	7/11/2014	7/28/2014
N012929-021B	MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	7/11/2014	7/28/2014
N012929-021C	MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	7/11/2014	7/28/2014
N012929-021D	MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	7/11/2014	7/28/2014
N012929-021E	MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	7/11/2014	7/28/2014
N012929-022A	CA-MW-103D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-022B	CA-MW-103D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-022C	CA-MW-103D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-022D	CA-MW-103D-059b-Q3	Water	7/11/2014 9:51:00 AM	7/11/2014	7/28/2014
N012929-023A	CA-MW-104D-059b-Q3	Water	7/11/2014 10:37:00 AM	7/11/2014	7/28/2014
N012929-023B	CA-MW-104D-059b-Q3	Water	7/11/2014 10:37:00 AM	7/11/2014	7/28/2014
N012929-023C	CA-MW-104D-059b-Q3	Water	7/11/2014 10:37:00 AM	7/11/2014	7/28/2014
N012929-023D	CA-MW-104D-059b-Q3	Water	7/11/2014 10:37:00 AM	7/11/2014	7/28/2014
N012929-024A	CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	7/11/2014	7/28/2014
N012929-024B	CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	7/11/2014	7/28/2014
N012929-024C	CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	7/11/2014	7/28/2014
N012929-024D	CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	7/11/2014	7/28/2014
N012929-024E	CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	7/11/2014	7/28/2014
N012929-025A	MW-750-059b-Q3	Water	7/11/2014 11:50:00 AM	7/11/2014	7/28/2014
N012929-026A	MW-751-059b-Q3	Water	7/11/2014 8:10:00 AM	7/11/2014	7/28/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012929-027A	MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	7/11/2014	7/28/2014
N012929-027B	MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	7/11/2014	7/28/2014
N012929-027C	MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	7/11/2014	7/28/2014
N012929-027D	MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	7/11/2014	7/28/2014
N012929-027E	MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	7/11/2014	7/28/2014
N012929-028A	SA-SM-05D-059b-Q3	Water	7/11/2014 9:18:00 AM	7/11/2014	7/28/2014
N012929-029A	SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	7/11/2014	7/28/2014
N012929-029B	SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	7/11/2014	7/28/2014
N012929-029C	SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	7/11/2014	7/28/2014
N012929-029D	SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	7/11/2014	7/28/2014
N012929-029E	SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	7/11/2014	7/28/2014
N012929-030A	SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	7/11/2014	7/28/2014
N012929-030B	SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	7/11/2014	7/28/2014
N012929-030C	SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	7/11/2014	7/28/2014
N012929-030D	SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	7/11/2014	7/28/2014
N012929-030E	SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	7/11/2014	7/28/2014
N012929-031A	SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	7/11/2014	7/28/2014
N012929-031B	SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	7/11/2014	7/28/2014
N012929-031C	SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	7/11/2014	7/28/2014
N012929-031D	SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	7/11/2014	7/28/2014
N012929-031E	SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	7/11/2014	7/28/2014
N012929-032A	MW-752-059b-Q3	Water	7/11/2014 10:00:00 AM	7/11/2014	7/28/2014
N012929-033A	PMW-03-059b-Q3	Water	7/11/2014 12:17:00 PM	7/11/2014	7/28/2014
N012929-033B	PMW-03-059b-Q3	Water	7/11/2014 12:17:00 PM	7/11/2014	7/28/2014
N012929-033C	PMW-03-059b-Q3	Water	7/11/2014 12:17:00 PM	7/11/2014	7/28/2014
N012929-033D	PMW-03-059b-Q3	Water	7/11/2014 12:17:00 PM	7/11/2014	7/28/2014
N012929-034A	PMW-04-059b-Q3	Water	7/11/2014 10:58:00 AM	7/11/2014	7/28/2014
N012929-034B	PMW-04-059b-Q3	Water	7/11/2014 10:58:00 AM	7/11/2014	7/28/2014
N012929-034C	PMW-04-059b-Q3	Water	7/11/2014 10:58:00 AM	7/11/2014	7/28/2014
N012929-034D	PMW-04-059b-Q3	Water	7/11/2014 10:58:00 AM	7/11/2014	7/28/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012929
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012929-035A	PMW-05-059b-Q3	Water	7/11/2014 9:48:00 AM	7/11/2014	7/28/2014
N012929-035B	PMW-05-059b-Q3	Water	7/11/2014 9:48:00 AM	7/11/2014	7/28/2014
N012929-035C	PMW-05-059b-Q3	Water	7/11/2014 9:48:00 AM	7/11/2014	7/28/2014
N012929-035D	PMW-05-059b-Q3	Water	7/11/2014 9:48:00 AM	7/11/2014	7/28/2014
N012929-036A	PMW-06-059b-Q3	Water	7/11/2014 9:08:00 AM	7/11/2014	7/28/2014
N012929-036B	PMW-06-059b-Q3	Water	7/11/2014 9:08:00 AM	7/11/2014	7/28/2014
N012929-036C	PMW-06-059b-Q3	Water	7/11/2014 9:08:00 AM	7/11/2014	7/28/2014
N012929-036D	PMW-06-059b-Q3	Water	7/11/2014 9:08:00 AM	7/11/2014	7/28/2014



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	CA-MW-204D-059b-Q3
Lab Order:	N012929	Collection Date:	7/11/2014 9:04:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012929-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	29	0.080	1.0	µg/L	5		7/14/2014 10:49 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-002

Client Sample ID: MW-923-059b-Q3
Collection Date: 7/11/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	29	0.080	1.0		µg/L	5	7/14/2014 06:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:06:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 11:09 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	64	0.16	2.0		µg/L	10	7/14/2014 11:19 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-307D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152	PrepDate	Analyst: RB
Hexavalent Chromium	0.51 0.016	0.20	µg/L 1 7/14/2014 11:29 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-747-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:40:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 05:44 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 11:39 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-007

Client Sample ID: MW-78D-059b-Q3
Collection Date: 7/11/2014 11:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/14/2014 11:49 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/14/2014 01:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-008

Client Sample ID: MW-748-059b-Q3
Collection Date: 7/11/2014 11:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 04:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 12:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-009

Client Sample ID: SA-SM-01D-059b-Q3
Collection Date: 7/11/2014 9:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 12:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-010

Client Sample ID: SA-SM-01S-059b-Q3
Collection Date: 7/11/2014 8:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	740	1.6	20		µg/L	100	7/14/2014 12:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-011

Client Sample ID: SA-SM-02D-059b-Q3
Collection Date: 7/11/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 12:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-012

Client Sample ID: SA-SM-02S-059b-Q3
Collection Date: 7/11/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate		Analyst: RB
Hexavalent Chromium	1800	3.2	40	µg/L	200	7/14/2014 12:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-013

Client Sample ID: SA-SM-10D-059b-Q3
Collection Date: 7/11/2014 11:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	22	0.032	0.40		µg/L	2	7/14/2014 07:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-014

Client Sample ID: SA-SM-10S-059b-Q3
Collection Date: 7/11/2014 10:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 01:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-015

Client Sample ID: MW-749-059b-Q3
Collection Date: 7/11/2014 11:37:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140716A	QC Batch: R94169				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/16/2014 07:44 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-016

Client Sample ID: SA-SM-03D-059b-Q3
Collection Date: 7/11/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 01:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-932-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:12:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-018	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 05:56 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 07:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-019

Client Sample ID: SA-SM-04S-059b-Q3
Collection Date: 7/11/2014 9:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 07:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-020

Client Sample ID: CA-MW-103-059b-Q3
Collection Date: 7/11/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152				PrepDate		Analyst: RB
Hexavalent Chromium	0.23	0.016	0.20		µg/L	1	7/14/2014 02:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-021

Client Sample ID: MW-921-059b-Q3
Collection Date: 7/11/2014 9:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140714A	QC Batch: R94152			PrepDate		Analyst: RB
Hexavalent Chromium	0.28	0.016	0.20	µg/L	1	7/14/2014 02:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-022	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149			PrepDate			Analyst: RB
Hexavalent Chromium	19	0.032	0.40		µg/L	2	7/14/2014 05:17 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 04:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:32:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-024	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149	PrepDate	Analyst: RB
Hexavalent Chromium	ND 0.016 0.20	µg/L	1 7/14/2014 04:58 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-025

Client Sample ID: MW-750-059b-Q3
Collection Date: 7/11/2014 11:50:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 05:15 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714A	QC Batch: R94149				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 05:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-026

Client Sample ID: MW-751-059b-Q3
Collection Date: 7/11/2014 8:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 06:17 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 07:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-027

Client Sample ID: MW-01-059b-Q3
Collection Date: 7/11/2014 7:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150				PrepDate		Analyst: RB
Hexavalent Chromium	550	0.80	10		µg/L	50	7/14/2014 08:59 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140715A	QC Batch: 46040				PrepDate	7/14/2014	Analyst: CEI
Chromium	610	0.15	5.0		µg/L	5	7/15/2014 01:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-029

Client Sample ID: SA-SM-05S-059b-Q3
Collection Date: 7/11/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 07:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-030

Client Sample ID: SA-SM-07D-059b-Q3
Collection Date: 7/11/2014 10:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150			PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20	µg/L	1	7/14/2014 07:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-07S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150	PrepDate	Analyst: RB
Hexavalent Chromium	ND 0.016 0.20	µg/L	1 7/14/2014 07:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-032

Client Sample ID: MW-752-059b-Q3
Collection Date: 7/11/2014 10:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140715A	QC Batch: R94144				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/15/2014 06:38 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 07:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-033

Client Sample ID: PMW-03-059b-Q3
Collection Date: 7/11/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150				PrepDate		Analyst: RB
Hexavalent Chromium	320	0.32	4.0		µg/L	20	7/14/2014 08:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140715A	QC Batch: 46040				PrepDate	7/14/2014	Analyst: CEI
Chromium	360	0.15	5.0		µg/L	5	7/15/2014 02:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-034

Client Sample ID: PMW-04-059b-Q3
Collection Date: 7/11/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150			PrepDate			Analyst: RB
Hexavalent Chromium	59	0.16	2.0		µg/L	10	7/14/2014 08:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-035

Client Sample ID: PMW-05-059b-Q3
Collection Date: 7/11/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150				PrepDate		Analyst: RB
Hexavalent Chromium	750	1.6	20		µg/L	100	7/14/2014 08:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-036

Client Sample ID: PMW-06-059b-Q3
Collection Date: 7/11/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140714B	QC Batch: R94150			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/14/2014 08:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94144	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: PBW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805549
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94144	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: LCSW	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805550
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101 90 110

Sample ID N012914-016ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805552
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.016	0.060			0.01821 0 20

Sample ID N012914-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805554
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.03243	91.8 90 110

Sample ID N012914-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144
Client ID: ZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805555
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.204	0.060	0.2000	0.01821	93.1 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012914-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805557						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.389	0.060	0.2000	0.1831	103	90	110				

Sample ID N012914-025AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805558						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.374	0.060	0.2000	0.1831	95.3	90	110	0.3887	3.95	20	

Sample ID N012914-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.250	0.060	0.2000	0.04395	103	90	110				

Sample ID N012916-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0.01297	97.0	90	110				

Sample ID N012916-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01744	95.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012916-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01292	102	90	110				

Sample ID N012918-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.294	0.060	0.2000	0.09825	97.7	90	110				

Sample ID N012918-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805574						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0.01296	95.9	90	110				

Sample ID N012918-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805576						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02054	97.8	90	110				

Sample ID N012929-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01779	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012929-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805580						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01747	101	90	110				

Sample ID N012929-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805584						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.6	90	110				

Sample ID N012929-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01301	98.6	90	110				

Sample ID N012929-032AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94144						
Client ID: ZZZZZZ	Batch ID: R94144	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805588						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01650	97.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012947-002AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94169						
Client ID: ZZZZZZ	Batch ID: R94169	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1806895							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.201	0.060	0.2000	0	100	90	110	0.1911	4.98	20	

Sample ID N012929-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94169						
Client ID: ZZZZZZ	Batch ID: R94169	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1806939							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.223	0.060	0.2000	0.02264	100	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110	0.2177	0.113	20	

Sample ID N012990-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0	110	90	110				S

Sample ID N012990-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813823						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.229	0.060	0.2000	0.01365	107	90	110				

Sample ID N012990-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.224	0.060	0.2000	0.01237	106	90	110				

Sample ID N012990-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.267	0.060	0.2000	0.06129	103	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.01562	105	90	110				

Sample ID N012990-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813831						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012929-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813835						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01203	104	90	110				

Sample ID N013004-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N013004-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813839						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0	107	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013004-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813841							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01332	101	90	110				

Sample ID N013004-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94149	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: PBW	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805833						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94149	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: LCSW	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805834						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.870	0.20	5.000	0	97.4	90	110				
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Sample ID N012916-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805836						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012916-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.985	0.20	1.000	0	98.5	90	110				
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Sample ID N012916-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805838						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110	0.9854	0.698	20	
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012916-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.065	0.20	1.000	1.090	97.5	90	110
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Sample ID N012916-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110
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Sample ID N012916-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.363	0.20	1.000	0.3755	98.7	90	110
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Sample ID N012916-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.987	0.20	1.000	0.9730	101	90	110
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Sample ID N012916-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.774	0.20	1.000	0.8090	96.5	90	110
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012916-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.914	0.20	1.000	0.9179	99.6	90	110				

Sample ID N012916-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.703	0.20	1.000	1.741	96.2	90	110				

Sample ID N012916-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.286	0.20	1.000	0.2827	100	90	110				

Sample ID N012916-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805865						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N012916-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805868						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.098	0.20	1.000	1.121	97.6	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805874							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.155	0.20	1.000	0.1474	101	90	110				

Sample ID N012929-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805875							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.982	0.20	1.000	0	98.2	90	110				

Sample ID N012929-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94149						
Client ID: ZZZZZZ	Batch ID: R94149	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805876							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.023	0.20	1.000	0	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94150	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: PBW	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805887						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94150	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: LCSW	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.889	0.20	5.000	0	97.8	90	110				
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Sample ID N012929-026A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805902						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012929-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805903						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.047	0.20	1.000	0	105	90	110				
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Sample ID N012929-026A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805904						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.054	0.20	1.000	0	105	90	110	1.047	0.695	20	
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805905						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110				

Sample ID N012929-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805906						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.481	0.20	1.000	1.457	102	90	110				

Sample ID N012929-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805907						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.034	0.20	1.000	0	103	90	110				

Sample ID N012929-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805908						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.062	0.20	1.000	0	106	90	110				

Sample ID N012929-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805911						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110				

Qualifiers:

- | | | |
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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012914-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805913							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.700	0.20	1.000	0.6400	106	90	110				

Sample ID N012914-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94150						
Client ID: ZZZZZZ	Batch ID: R94150	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1805915							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.854	0.20	1.000	2.810	104	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94152	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: PBW	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94152	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: LCSW	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1805981						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.077	0.20	5.000	0	102	90	110				
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Sample ID N012928-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.723	0.20						1.788	3.71	20	
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Sample ID N012928-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806004						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.731	0.20	1.000	1.788	94.3	90	110				
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Sample ID N012929-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.079	0.20	1.000	0	108	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.604	0.20	1.000	0.5133	109	90	110				

Sample ID N012929-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.025	0.20	1.000	0	102	90	110				

Sample ID N012929-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806008						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.635	0.20	1.000	1.600	104	90	110				

Sample ID N012929-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID N012929-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806012						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.034	0.20	1.000	0	103	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1806013							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.041	0.20	1.000	0	104	90	110				

Sample ID N012929-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1806014							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Sample ID N012929-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1806015							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N012929-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1806016							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.155	0.20	1.000	0.2301	92.5	90	110				

Sample ID N012929-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6	Analysis Date: 7/14/2014	SeqNo: 1806017							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012929-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.067	0.20	1.000	0	107	90	110				

Sample ID N012929-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.096	0.20	1.000	0	110	90	110				

Sample ID N012929-019A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.041	0.20	1.000	0	104	90	110	1.096	5.15	20	

Sample ID N012929-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94152						
Client ID: ZZZZZZ	Batch ID: R94152	TestNo: EPA 218.6		Analysis Date: 7/14/2014	SeqNo: 1806027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.241	0.20	1.000	0.2812	96.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46039	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46039	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.272 1.0 10.00 0 103 85 115

Sample ID N012930-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804940						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.365 1.0 10.00 0.2046 102 75 125

Sample ID N012930-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804941						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.222 1.0 10.00 0.2046 100 75 125 10.37 1.39 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46040	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804966						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46040	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804967						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.231 1.0 10.00 0 102 85 115

Sample ID N012929-019B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.641 1.0 10.00 0.7692 98.7 75 125

Sample ID N012929-019B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804972						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.729 1.0 10.00 0.7692 99.6 75 125 10.64 0.823 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-001

Client Sample ID: CA-MW-204D-059b-Q3
Collection Date: 7/11/2014 9:04:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	68	0.33	5.0		mg/L	10	7/15/2014 02:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	7/12/2014 01:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-002

Client Sample ID: MW-923-059b-Q3
Collection Date: 7/11/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	180	0.66	10		mg/L	20	7/15/2014 02:53 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	7/12/2014 01:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-003

Client Sample ID: CA-MW-204S-059b-Q3
Collection Date: 7/11/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	240	0.66	10		mg/L	20	7/15/2014 03:06 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	7/12/2014 01:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-009

Client Sample ID: SA-SM-01D-059b-Q3
Collection Date: 7/11/2014 9:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	53	0.33	5.0		mg/L	10	7/15/2014 03:43 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 01:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-010

Client Sample ID: SA-SM-01S-059b-Q3
Collection Date: 7/11/2014 8:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	60	0.33	5.0		mg/L	10	7/15/2014 03:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	1.0	0.0051	0.050		mg/L	1	7/12/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-011

Client Sample ID: SA-SM-02D-059b-Q3
Collection Date: 7/11/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	42	0.33	5.0		mg/L	10	7/15/2014 04:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 02:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-012

Client Sample ID: SA-SM-02S-059b-Q3
Collection Date: 7/11/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	120	1.6	25		mg/L	50	7/15/2014 11:43 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	2.3	0.010	0.10		mg/L	2	7/12/2014 02:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-013

Client Sample ID: SA-SM-10D-059b-Q3
Collection Date: 7/11/2014 11:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154						Analyst: PS
Sulfate	31	0.16	2.5		mg/L	5	7/15/2014 04:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102						Analyst: PS
Nitrate as N	0.21	0.0051	0.050		mg/L	1	7/12/2014 02:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-014

Client Sample ID: SA-SM-10S-059b-Q3
Collection Date: 7/11/2014 10:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	38	0.16	2.5		mg/L	5	7/15/2014 05:12 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 03:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-016

Client Sample ID: SA-SM-03D-059b-Q3
Collection Date: 7/11/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	41	0.16	2.5		mg/L	5	7/15/2014 05:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 03:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-018

Client Sample ID: MW-932-059b-Q3
Collection Date: 7/11/2014 9:12:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	1.7	0.033	0.50		mg/L	1	7/15/2014 05:37 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 03:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-019

Client Sample ID: SA-SM-04S-059b-Q3
Collection Date: 7/11/2014 9:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154				PrepDate		Analyst: PS
Sulfate	1.9	0.033	0.50		mg/L	1	7/15/2014 06:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 06:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-020

Client Sample ID: CA-MW-103-059b-Q3
Collection Date: 7/11/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/15/2014 07:31 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 06:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-021

Client Sample ID: MW-921-059b-Q3
Collection Date: 7/11/2014 9:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/15/2014 07:43 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 06:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-022

Client Sample ID: CA-MW-103D-059b-Q3
Collection Date: 7/11/2014 9:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	180	0.66	10		mg/L	20	7/15/2014 07:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	1.1	0.0051	0.050		mg/L	1	7/12/2014 07:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-023

Client Sample ID: CA-MW-104D-059b-Q3
Collection Date: 7/11/2014 10:37:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	170	0.66	10		mg/L	20	7/15/2014 08:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	0.058	0.0051	0.050		mg/L	1	7/12/2014 07:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-024

Client Sample ID: CA-MW-104S-059b-Q3
Collection Date: 7/11/2014 11:32:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155						Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/15/2014 08:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102						Analyst: PS
Nitrate as N	0.90	0.026	0.25		mg/L	5	7/12/2014 05:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-027

Client Sample ID: MW-01-059b-Q3
Collection Date: 7/11/2014 7:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155						Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/15/2014 08:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103						Analyst: PS
Nitrate as N	5.9	0.026	0.25		mg/L	5	7/12/2014 10:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-029

Client Sample ID: SA-SM-05S-059b-Q3
Collection Date: 7/11/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/16/2014 02:54 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 10:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-030

Client Sample ID: SA-SM-07D-059b-Q3
Collection Date: 7/11/2014 10:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	66	0.33	5.0		mg/L	10	7/15/2014 09:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712A	QC Batch: R94102				PrepDate		Analyst: PS
Nitrate as N	0.060	0.0051	0.050		mg/L	1	7/12/2014 06:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-031

Client Sample ID: SA-SM-07S-059b-Q3
Collection Date: 7/11/2014 10:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	69	0.33	5.0		mg/L	10	7/15/2014 09:37 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 09:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-033

Client Sample ID: PMW-03-059b-Q3
Collection Date: 7/11/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	63	0.33	5.0		mg/L	10	7/15/2014 09:50 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	2.8	0.010	0.10		mg/L	2	7/12/2014 09:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-034

Client Sample ID: PMW-04-059b-Q3
Collection Date: 7/11/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	91	0.33	5.0		mg/L	10	7/15/2014 10:02 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	0.55	0.0051	0.050		mg/L	1	7/12/2014 09:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-035

Client Sample ID: PMW-05-059b-Q3
Collection Date: 7/11/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	80	0.33	5.0		mg/L	10	7/15/2014 10:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	0.77	0.0051	0.050		mg/L	1	7/12/2014 09:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-036

Client Sample ID: PMW-06-059b-Q3
Collection Date: 7/11/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715B	QC Batch: R94155				PrepDate		Analyst: PS
Sulfate	100	0.33	5.0		mg/L	10	7/15/2014 10:28 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140712B	QC Batch: R94103				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/12/2014 09:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R94154_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94154			
Client ID:	PBW	Batch ID:	R94154	TestNo:	EPA 300.0			Analysis Date:	7/15/2014	SeqNo:	1806163			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		ND		0.50										

Sample ID	LCS-R94154_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94154			
Client ID:	LCSW	Batch ID:	R94154	TestNo:	EPA 300.0			Analysis Date:	7/15/2014	SeqNo:	1806164			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		5.053		0.50	5.000	0		101	90	110				

Sample ID	N012929-010C-DUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94154			
Client ID:	ZZZZZ	Batch ID:	R94154	TestNo:	EPA 300.0			Analysis Date:	7/15/2014	SeqNo:	1806182			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		60.630		5.0							60.47	0.264	20	

Sample ID	N012929-010C-MS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94154			
Client ID:	ZZZZZ	Batch ID:	R94154	TestNo:	EPA 300.0			Analysis Date:	7/15/2014	SeqNo:	1806183			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		108.450		5.0	50.00	60.47		96.0	80	120				

Sample ID	N012929-010C-MSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94154			
Client ID:	ZZZZZ	Batch ID:	R94154	TestNo:	EPA 300.0			Analysis Date:	7/15/2014	SeqNo:	1806184			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		109.450		5.0	50.00	60.47		98.0	80	120	108.4	0.918	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94155_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94155						
Client ID: PBW	Batch ID: R94155	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94155_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94155						
Client ID: LCSW	Batch ID: R94155	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806204						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 5.039 0.50 5.000 0 101 90 110

Sample ID N012929-035C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94155						
Client ID: ZZZZZZ	Batch ID: R94155	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806219						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 82.490 5.0 79.77 3.35 20

Sample ID N012929-035C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94155						
Client ID: ZZZZZZ	Batch ID: R94155	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 132.040 5.0 50.00 79.77 105 80 120

Sample ID N012929-035C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94155						
Client ID: ZZZZZZ	Batch ID: R94155	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806223						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 131.320 5.0 50.00 79.77 103 80 120 132.0 0.547 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012929-009C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94102						
Client ID: ZZZZZZ	Batch ID: R94102	TestNo: EPA 300.0		Analysis Date: 7/12/2014	SeqNo: 1803622						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.057	0.050	1.000	0	106	80	120	1.046	1.05	20	

Sample ID N012929-010C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94102						
Client ID: ZZZZZZ	Batch ID: R94102	TestNo: EPA 300.0		Analysis Date: 7/12/2014	SeqNo: 1803623						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.064	0.050	1.000	0.9990	106	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:04:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 03:21 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-002

Client Sample ID: MW-923-059b-Q3
Collection Date: 7/11/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	7/15/2014 03:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:06:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 04:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-009

Client Sample ID: SA-SM-01D-059b-Q3
Collection Date: 7/11/2014 9:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-SM-01S-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 8:44:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140715A** QC Batch: **R94138** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/15/2014 04:30 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-SM-02D-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 10:57:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-011

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140715A** QC Batch: **R94138** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/15/2014 04:53 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-02S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 06:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-10D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 06:25 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-10S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:59:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 06:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-03D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:57:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/15/2014 07:11 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-018

Client Sample ID: MW-932-059b-Q3
Collection Date: 7/11/2014 9:12:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140715A	QC Batch: R94138			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/15/2014 07:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-019

Client Sample ID: SA-SM-04S-059b-Q3
Collection Date: 7/11/2014 9:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 05:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 06:10 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-021

Client Sample ID: MW-921-059b-Q3
Collection Date: 7/11/2014 9:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 06:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-022	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 06:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	9.0	0.041	1.0	mg/L	1		7/17/2014 07:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:32:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-024	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	9.9	0.041	1.0	mg/L	1		7/17/2014 08:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-027

Client Sample ID: MW-01-059b-Q3
Collection Date: 7/11/2014 7:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate		Analyst: PS
Organic Carbon, Total	1.4	0.041	1.0	mg/L	1	7/17/2014 08:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-029

Client Sample ID: SA-SM-05S-059b-Q3
Collection Date: 7/11/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 09:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-07D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-030	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 09:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-07S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 09:59 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** PMW-03-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 12:17:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-033

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140717A** QC Batch: **R94183** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/17/2014 10:22 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-034

Client Sample ID: PMW-04-059b-Q3
Collection Date: 7/11/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/17/2014 10:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-035

Client Sample ID: PMW-05-059b-Q3
Collection Date: 7/11/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/17/2014 05:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-036

Client Sample ID: PMW-06-059b-Q3
Collection Date: 7/11/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/17/2014 11:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94138	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: PBW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804875
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94138	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: LCSW	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804876
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.681	1.0	10.00	0	107	85	115				
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Sample ID N012929-009D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804877
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.396	1.0	10.00	0.5304	98.7	75	125				
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Sample ID N012929-009D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94138
Client ID: ZZZZZ	Batch ID: R94138	TestNo: SM 5310C		Analysis Date: 7/15/2014	SeqNo: 1804878
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.331	1.0	10.00	0.5304	98.0	75	125	10.40	0.633	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94183	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183						
Client ID: PBW	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94183	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183						
Client ID: LCSW	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807605						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.623 1.0 10.00 0 106 85 115

Sample ID N012929-035D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183						
Client ID: ZZZZZ	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807606						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.756 1.0 10.00 0.5212 102 75 125

Sample ID N012929-035D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183						
Client ID: ZZZZZ	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807607						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.829 1.0 10.00 0.5212 103 75 125 10.76 0.677 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:04:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 12:31 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-002

Client Sample ID: MW-923-059b-Q3
Collection Date: 7/11/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 12:35 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:06:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 12:49 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 12:54 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-307D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	0.63 0.0013	0.020	mg/L 1 7/14/2014 01:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-78D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:36:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 01:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-009

Client Sample ID: SA-SM-01D-059b-Q3
Collection Date: 7/11/2014 9:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041			PrepDate	7/14/2014	Analyst: CEI	
Iron	4.9	0.0013	0.020	mg/L	1	7/14/2014 01:09 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-01S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 8:44:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46041	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L
			1
			7/14/2014 01:14 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-011

Client Sample ID: SA-SM-02D-059b-Q3
Collection Date: 7/11/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	5.6	0.0013	0.020	mg/L	1	7/14/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-02S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 02:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-013

Client Sample ID: SA-SM-10D-059b-Q3
Collection Date: 7/11/2014 11:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 02:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-10S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:59:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	0.97 0.0013	0.020	mg/L 1 7/14/2014 02:12 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-03D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:57:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	4.8 0.0013	0.020	mg/L 1 7/14/2014 02:16 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-018

Client Sample ID: MW-932-059b-Q3
Collection Date: 7/11/2014 9:12:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	2.5	0.0013	0.020	mg/L	1	7/14/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-019

Client Sample ID: SA-SM-04S-059b-Q3
Collection Date: 7/11/2014 9:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	2.6	0.0013	0.020	mg/L	1	7/14/2014 02:27 PM

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - ND Not Detected at the Reporting Limit
 - Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	0.37 0.0013	0.020	mg/L 1 7/14/2014 04:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** MW-921-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 9:10:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-021

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron 0.35 0.0013 0.020 mg/L 1 7/14/2014 02:46 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-103D-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-022

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron 0.089 0.0013 0.020 mg/L 1 7/14/2014 02:51 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	0.059 0.0013	0.020	mg/L 1 7/14/2014 02:57 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-104S-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 11:32:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-024

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron 2.1 0.0013 0.020 mg/L 1 7/14/2014 03:02 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-027

Client Sample ID: MW-01-059b-Q3
Collection Date: 7/11/2014 7:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 03:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-SM-05S-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-029

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron 11 0.0013 0.020 mg/L 1 7/14/2014 03:11 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-SM-07D-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-030

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 7/14/2014 03:16 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** SA-SM-07S-059b-Q3
Lab Order: N012929 **Collection Date:** 7/11/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012929-031

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140714B** QC Batch: **46042** PrepDate: **7/14/2014** Analyst: **CEI**
Iron 3.5 0.0013 0.020 mg/L 1 7/14/2014 03:21 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-033

Client Sample ID: PMW-03-059b-Q3
Collection Date: 7/11/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 03:26 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: PMW-04-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:58:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-034	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042	PrepDate: 7/14/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/14/2014 03:30 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-035

Client Sample ID: PMW-05-059b-Q3
Collection Date: 7/11/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/14/2014 03:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-036

Client Sample ID: PMW-06-059b-Q3
Collection Date: 7/11/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140714B	QC Batch: 46042			PrepDate	7/14/2014	Analyst: CEI	
Iron	3.3	0.0013	0.020	mg/L	1	7/14/2014 03:48 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46041	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: PBW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804518
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46041	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: LCSW	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804519
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.112 0.020 0.1000 0 112 85 115

Sample ID N012916-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804523
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125

Sample ID N012916-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/14/2014	RunNo: 94121
Client ID: ZZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804524
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.101 0.020 0.1000 0 101 75 125 0.1008 0.397 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:04:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	2.6	0.027	0.10		µg/L	1 7/14/2014 02:43 PM
Manganese	35	0.026	0.50		µg/L	1 7/14/2014 02:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-002

Client Sample ID: MW-923-059b-Q3
Collection Date: 7/11/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10	µg/L	1	7/14/2014 12:54 PM
Manganese	31	0.026	0.50	µg/L	1	7/14/2014 12:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-204S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:06:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	0.85	0.027	0.10		µg/L	1	7/14/2014 01:22 PM
Manganese	2500	0.64	12		µg/L	25	7/15/2014 11:45 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	0.66	0.027	0.10		µg/L	1	7/14/2014 01:27 PM
Manganese	ND	0.026	0.50		µg/L	1	7/14/2014 01:27 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-307D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	13	0.027	0.10		µg/L	1 7/14/2014 01:33 PM
Manganese	1700	0.64	12		µg/L	25 7/15/2014 11:50 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-007

Client Sample ID: MW-78D-059b-Q3
Collection Date: 7/11/2014 11:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	0.78	0.027	0.10	µg/L	1	7/14/2014 01:38 PM
Manganese	1.7	0.026	0.50	µg/L	1	7/14/2014 01:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-009

Client Sample ID: SA-SM-01D-059b-Q3
Collection Date: 7/11/2014 9:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140715A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	220	0.13	0.50	µg/L	5	7/15/2014 11:56 AM
Manganese	5100	1.3	25	µg/L	50	7/15/2014 12:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-010

Client Sample ID: SA-SM-01S-059b-Q3
Collection Date: 7/11/2014 8:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	0.68	0.027	0.10	µg/L	1	7/14/2014 01:49 PM
Manganese	ND	0.026	0.50	µg/L	1	7/14/2014 01:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-011

Client Sample ID: SA-SM-02D-059b-Q3
Collection Date: 7/11/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140715A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	190	0.13	0.50	µg/L	5	7/15/2014 12:07 PM	
Manganese	4500	1.3	25	µg/L	50	7/15/2014 12:12 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-012

Client Sample ID: SA-SM-02S-059b-Q3
Collection Date: 7/11/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	1.5	0.027	0.10	µg/L	1	7/14/2014 02:00 PM
Manganese	ND	0.026	0.50	µg/L	1	7/14/2014 02:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-013

Client Sample ID: SA-SM-10D-059b-Q3
Collection Date: 7/11/2014 11:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10		µg/L	1	7/14/2014 02:15 PM
Manganese	34	0.026	0.50		µg/L	1	7/14/2014 02:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-SM-10S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:59:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI
Arsenic	32	0.027	0.10		µg/L	1 7/14/2014 02:32 PM
Manganese	490	0.13	2.5		µg/L	5 7/15/2014 12:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-016

Client Sample ID: SA-SM-03D-059b-Q3
Collection Date: 7/11/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	36	0.027	0.10		µg/L	1	7/14/2014 02:37 PM
Manganese	1900	0.64	12		µg/L	25	7/15/2014 12:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-018

Client Sample ID: MW-932-059b-Q3
Collection Date: 7/11/2014 9:12:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	7.7	0.027	0.10	µg/L	1	7/14/2014 05:00 PM	
Manganese	1800	0.64	12	µg/L	25	7/15/2014 02:25 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-019

Client Sample ID: SA-SM-04S-059b-Q3
Collection Date: 7/11/2014 9:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	7.9	0.027	0.10		µg/L	1	7/14/2014 02:59 PM
Manganese	1900	0.64	12		µg/L	25	7/15/2014 12:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A		EPA 6020			
RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	2.8	0.027	0.10		µg/L	1 7/14/2014 03:37 PM
Manganese	650	0.13	2.5		µg/L	5 7/15/2014 01:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-021

Client Sample ID: MW-921-059b-Q3
Collection Date: 7/11/2014 9:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040				PrepDate	7/14/2014	Analyst: CEI
Arsenic	2.7	0.027	0.10		µg/L	1	7/14/2014 03:43 PM
Manganese	640	0.13	2.5		µg/L	5	7/15/2014 01:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-103D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 9:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-022	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	1.4	0.027	0.10	µg/L	1	7/14/2014 03:48 PM
Manganese	2.1	0.026	0.50	µg/L	1	7/14/2014 03:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104D-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	5.8	0.027	0.10		µg/L	1 7/14/2014 03:54 PM
Manganese	2600	0.64	12		µg/L	25 7/15/2014 01:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-104S-059b-Q3
Lab Order: N012929	Collection Date: 7/11/2014 11:32:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012929-024	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	6.6	0.027	0.10		µg/L	1 7/14/2014 03:59 PM
Manganese	190	0.13	2.5		µg/L	5 7/15/2014 01:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-027

Client Sample ID: MW-01-059b-Q3
Collection Date: 7/11/2014 7:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	8.3	0.027	0.10	µg/L	1	7/14/2014 04:05 PM	
Manganese	410	0.13	2.5	µg/L	5	7/15/2014 01:29 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-029

Client Sample ID: SA-SM-05S-059b-Q3
Collection Date: 7/11/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	16	0.027	0.10		µg/L	1	7/14/2014 04:10 PM
Manganese	3400	0.64	12		µg/L	25	7/15/2014 01:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-030

Client Sample ID: SA-SM-07D-059b-Q3
Collection Date: 7/11/2014 10:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	7.5	0.027	0.10	µg/L	1	7/14/2014 04:16 PM
Manganese	240	0.13	2.5	µg/L	5	7/15/2014 01:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-031

Client Sample ID: SA-SM-07S-059b-Q3
Collection Date: 7/11/2014 10:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	19	0.027	0.10	µg/L	1	7/14/2014 04:21 PM	
Manganese	3500	0.64	12	µg/L	25	7/15/2014 01:57 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-033

Client Sample ID: PMW-03-059b-Q3
Collection Date: 7/11/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040				PrepDate: 7/14/2014		Analyst: CEI
Arsenic	2.5	0.027	0.10		µg/L	1	7/14/2014 04:27 PM
Manganese	ND	0.026	0.50		µg/L	1	7/14/2014 04:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-034

Client Sample ID: PMW-04-059b-Q3
Collection Date: 7/11/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	1.2	0.027	0.10		µg/L	1	7/14/2014 04:43 PM
Manganese	840	0.64	12		µg/L	25	7/15/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-035

Client Sample ID: PMW-05-059b-Q3
Collection Date: 7/11/2014 9:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI
Arsenic	4.1	0.027	0.10	µg/L	1	7/14/2014 04:49 PM
Manganese	500	0.13	2.5	µg/L	5	7/15/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012929-036

Client Sample ID: PMW-06-059b-Q3
Collection Date: 7/11/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46040			PrepDate	7/14/2014	Analyst: CEI	
Arsenic	170	0.027	0.10	µg/L	1	7/14/2014 04:54 PM	
Manganese	4600	1.3	25	µg/L	50	7/15/2014 02:19 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46039	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID LCS-46039	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805008						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.778	0.10	10.00	0	108	85	115				
Manganese	103.912	0.50	100.0	0	104	85	115				

Sample ID N012930-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	13.027	0.10	10.00	1.729	113	75	125				
Manganese	100.423	0.50	100.0	0	100	75	125				

Sample ID N012930-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.906	0.10	10.00	1.729	112	75	125	13.03	0.932	20	
Manganese	99.364	0.50	100.0	0	99.4	75	125	100.4	1.06	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46040	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46040	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1805040						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID LCS-46040	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46040	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1805041						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	10.751	0.10	10.00	0	108	85	115				
Manganese	105.213	0.50	100.0	0	105	85	115				

Sample ID N012929-019B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1805045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	19.270	0.10	10.00	7.883	114	75	125				
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Sample ID N012929-019B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1805046						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	18.981	0.10	10.00	7.883	111	75	125	19.27	1.52	20	
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Sample ID N012929-019B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/15/2014	SeqNo: 1805163						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Manganese	2011.383	12	100.0	1880	131	75	125					S
-----------	----------	----	-------	------	-----	----	-----	--	--	--	--	---

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	N012929-019B-MSD	SampType:	MSD	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/14/2014	RunNo:	94140											
Client ID:	ZZZZZZ	Batch ID:	46040	TestNo:	EPA 6020		EPA 3010A	Analysis Date:	7/15/2014	SeqNo:	1805164											
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Manganese		1992.810		12		100.0		1880		112		75		125		2011		0.928		20		

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Please revise the COC as indicated below.

K. Blum

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PGE Hinkley		Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS						
Location Hinkley		Preservatives:	(NH4)2SO4, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	H2SO4, 4°C	4°C (blue ice)								
Project Number 492581.UR.IR.FW		Filtered:	Field	Field	Field	Field	Field	NA	Field								
Project Manager Jennifer Low		Holding Time (days):	28	180	180	180	2	28	7								
Sample Manager Jim Harvey			Cr(VI) (E218.6) FF	Metals Dissolved (6010BDis) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Anions (E300.0) FF NO3N, SO4	TOC (E6310)	Eosine, Fluorescein FF								
Cell Number (404) 229-2181																	
Fax Number (510) 622-9136																	
Task Order 59																	
Project 2014-COMPLIANCE-IRZ-059B-Q3																	
Turnaround Time 10 Days																	
Shipping Date:																	
COC Number:																	
SAMPLE ID	DATE	TIME	Matrix														
CA-MW-204D-059b-Q3	7/11/2014	0901	Water	X	X		X	X		6	DM						
MW-923-059b-Q3	7/11/2014	0856	Water	X	X		X	X		6	DM						
CA-MW-204S-059b-Q3	7/11/2014	0906	Water	X	X		X	X		6	PM						
CA-MW-303D-059b-Q3	7/11/2014	0951	Water	X	X		X			2	DM						
CA-MW-307D-059b-Q3	7/11/2014	1121	Water	X	X		X			2	DM						
MW-747-059b-Q3	7/11/2014	1140	Water	X						1	DM						
MW-78D-059b-Q3	7/11/2014	1136	Water	X	X	X			X	3	JM						
MW-748-059b-Q3	7/11/2014	1155	Water	X						1	JM						
SA-SM-01D-059b-Q3	7/11/2014	0924	Water	X	X		X	X		6	JM						
SA-SM-01S-059b-Q3	7/11/2014	0844	Water	X	X		X	X		6	JM						
SA-SM-02D-059b-Q3	7/11/2014	1057	Water	X	X		X	X		6	JM						
SA-SM-02S-059b-Q3	7/11/2014	1021	Water	X	X		X	X		6	JM						
SA-SM-10D-059b-Q3	7/11/2014	1141	Water	X	X		X	X	X	7	JM						
SA-SM-10S-059b-Q3	7/11/2014	1059	Water	X	X		X	X	X	7	JD						
MW-749-059b-Q3	7/11/2014	1137	Water	X						1	JD						
SA-SM-03D-059b-Q3	7/11/2014	0957	Water	X	X		X	X	X	7	JD						

Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures <i>K. Blum</i> <i>[Signature]</i> <i>[Signature]</i> <i>[Signature]</i>	Date/Time 7/11/14 1400 07/11/14 1130 07/11/14 1140 7/11/14 1001	Shipping Details Method of Shipment: On Ice: yes / no Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS
Preservatives:				(NH4)2, SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	H2SO4, 4°C	4°C (blue ice)			
Filtered:				Field	Field	Field	Field	Field	NA	Field			
Holding Time (days):				28	180	180	180	2	28	7			
				Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Anions (E300.0) FF NO3N, SO4	TOC (E5310)	Eosine, Fluorescein FF			
SAMPLE ID	DATE	TIME	Matrix										
CA-MW-204D-059b-Q3	7/11/2014	0901	Water	X	X		X	X	X		6	DM	
MW-923-059b-Q3	7/11/2014	0856	Water	X	X		X	X	X		6	DM	
CA-MW-204S-059b-Q3	7/11/2014	0906	Water	X	X		X	X	X		6	PM	
CA-MW-303D-059b-Q3	7/11/2014	0951	Water	X	X		X				2	DM	
CA-MW-307D-059b-Q3	7/11/2014	1121	Water	X	X		X				2	DM	
MW-747-059b-Q3	7/11/2014	1140	Water	X							1	DM	
MW-78D-059b-Q3	7/11/2014	1136	Water	X	X	X				X	3	JM	
MW-748-059b-Q3	7/11/2014	1155	Water	X							1	JM	
SA-SM-01D-059b-Q3	7/11/2014	0924	Water	X	X		X	X	X		6	JM	
SA-SM-01S-059b-Q3	7/11/2014	0844	Water	X	X		X	X	X		6	JM	
SA-SM-02D-059b-Q3	7/11/2014	1057	Water	X	X		X	X	X		6	JM	
SA-SM-02S-059b-Q3	7/11/2014	1021	Water	X	X		X	X	X		6	JM	
SA-SM-10D-059b-Q3	7/11/2014	1141	Water	X	X		X	X	X	X	7	JM	
SA-SM-10S-059b-Q3	7/11/2014	1059	Water	X	X		X	X	X	X	7	JD	
MW-749-059b-Q3	7/11/2014	1137	Water	X							1	JD	
SA-SM-03D-059b-Q3	7/11/2014	0957	Water	X	X		X	X	X	X	7	JD	

NO12929-1

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Approved by <i>H. Blum</i> Sampled by <i>John Hanvey</i> Relinquished by <i>John Hanvey</i> Received by <i>John Hanvey</i> Relinquished by <i>John Hanvey</i> Received by <i>John Hanvey</i>	Signatures Date/Time 7/11/14 1400 07/11/14 1400 07/11/14 1400 7/11/14 1400 7/11/14 1705 7/11/14 1705	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <i>3.62/3.52</i> Airbill No: <i>R#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:	Container: 250 ml Poly 500 ml Poly 500 ml Poly 500 ml Poly 1000ml Poly 3X40 ml VOA 50ml Centrifug	Preservatives: (NH4)2, SO4, NH4, OH, 4°C HNO3, 4°C HNO3, 4°C HNO3, 4°C 4°C H2SO4, 4°C 4°C (blue ice)	Filtered: Field Field Field Field Field NA Field	Holding Time (days): 28 180 180 180 2 28 7	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As, Cr, Mn Metals Dissolved (6020AFF) FF As, Mn Anions (E300.0) FF NO3N, SO4 TOC (E5310) Eosine, Fluorescein FF	Number of Containers COMMENTS								
	SAMPLE ID	DATE	TIME	Matrix										
	SA-SM-03S-059b-Q3	7/11/2014		Water	X		X	X	X	X	X		7	
	SA-SM-04D-059b-Q3	7/11/2014	0833	Water										1

MW-932-059b-Q3	7/11/2014	0912	Water	X	X		X	X	X	X			7	JD
SA-SM-04S-059b-Q3	7/11/2014	0902	Water	X	X		X	X	X	X			7	JD
CA-MW-103-059b-Q3	7/11/2014	0907	Water	X	X		X	X	X	X			7	LB
MW-921-059b-Q3	7/11/2014	0910	Water	X	X		X	X	X	X			7	LB
CA-MW-103D-059b-Q3	7/11/2014	0951	Water	X	X		X	X	X				6	LB
CA-MW-104D-059b-Q3	7/11/2014	1037	Water	X	X		X	X	X				6	LB
CA-MW-104S-059b-Q3	7/11/2014	1132	Water	X	X		X	X	X	X			7	LB
MW-750-059b-Q3	7/11/2014	1150	Water	X									1	LB
MW-751-059b-Q3	7/11/2014	0810	Water	X									1	SD
MW-01-059b-Q3	7/11/2014	0754	Water	X	X	X		X	X	X			7	SD
SA-SM-05D-059b-Q3	7/11/2014	0918	Water							X			1	SD
SA-SM-05S-059b-Q3	7/11/2014	0841	Water	X	X		X	X	X	X			7	SD
SA-SM-07D-059b-Q3	7/11/2014	1007	Water	X	X		X	X	X	X			7	SD
SA-SM-07S-059b-Q3	7/11/2014	1045	Water	X	X		X	X	X	X			7	SD

Signatures Approved by <i>J. Blinn</i> Sampled by <i>Jim Hanvey</i> Relinquished by <i>Jim Hanvey</i> Received by <i>J. Blinn</i> Relinquished by <i>Jim Hanvey</i> Received by <i>Amanda</i>	Date/Time 7/11/14 1400 07/11/14 1400 07/11/14 1400 7/11/14 1400 7/11/14 1705 7/11/14 1705	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 2-6°C / 3-10°C / 2-8°C Airbill No: 1P#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly 500 ml Poly 500 ml Poly 1000ml Poly 3X40 ml VOA 50ml Centrifug	Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C HNO3, 4°C HNO3, 4°C 4°C H2SO4, 4°C 4°C (blue ice)	Filtered: Field Field Field Field Field NA Field	Holding Time (days): 28 180 180 180 2 28 7	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIS) FF Fe Metals Dissolved (6020AFF) FF As, Cr, Mn Metals Dissolved (6020AFF) FF As, Mn Anions (E300.0) FF NO3N, SO4 TOC (E5310) Eosine, Fluorescein FF	Number of Containers	COMMENTS			
SAMPLE ID	DATE	TIME	Matrix										
MW-752-059b-Q3	7/11/2014	1000	Water	X								1	TH
PMW-03-059b-Q3	7/11/2014	1217	Water	X	X	X		X			X	6	TH
PMW-04-059b-Q3	7/11/2014	1058	Water	X	X		X	X			X	6	TH
PMW-05-059b-Q3	7/11/2014	0948	Water	X	X		X	X			X	6	TH
PMW-06-059b-Q3	7/11/2014	0908	Water	X	X		X	X			X	6	TH
TOTAL NUMBER OF CONTAINERS										177			

NO 12929-32

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Approved by <i>[Signature]</i> 7/11/14 1400 Sampled by <i>[Signature]</i> 07/11/14 1500 Relinquished by <i>[Signature]</i> 07/11/14 1500 Received by <i>[Signature]</i> 7/11/14 1400 Relinquished by <i>[Signature]</i> 7/11/14 1705 Received by <i>[Signature]</i> 7/11/14 1705	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>3-900</i> Airbill No: <i>12#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/11/2014 Workorder: N012929
 Rep sample Temp (Deg C): 3.9/2.6/3.1/2.8/3.6/3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| Was Client notified? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |

Comments

Checklist Completed B AC *A Cortes* 7/14/14

Reviewed By: *gog* 07/17/14

Sample Control

From: Katherine.Blinn@ch2m.com
Sent: Monday, July 14, 2014 1:41 PM
To: amanda.cortes@assetlaboratories.com
Cc: marlon@atl-labs.com; samplecontrol.lv@assetlaboratories.com; Jim.Harvey@CH2M.com
Subject: RE: Sample Collection Time Discrepancy
Attachments: COC_CompB_071114_Revised.pdf

Hi Amanda,

The time on the COC should be 0904. Please see the revised COC (attached).

Please let me know if there are any other issues.

Thanks.

Katherine A.T. Blinn, E.I.T.

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Monday, July 14, 2014 1:34 PM
To: Blinn, Katherine/NJO
Cc: 'Marlon Cartin'; 'ASSET, Inc. Sample Control'
Subject: Sample Collection Time Discrepancy

Hello, Katherine.

Regarding the samples we received on Friday for Compliance-IRZB, we received one sample that has a sample collection time conflict with the COC. For sample ID CA-MW-204D-059b-Q3, the collection time on the COC is 0901, however, the sample container says the sample collection time was 0904. Please reference attached COC.

Thank you,

Amanda M. Cortes

Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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Thank you.



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protom, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

Field Sampler: Thinh Hoang

14-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESC EIN
N012929-007C / MW-78D-059b-Q3	Water	7/11/2014 11:36:00 AM	2OZP	1	1
N012929-013E / SA-SM-10D-059b-Q3	Water	7/11/2014 11:41:00 AM	2OZP	1	1
N012929-014E / SA-SM-10S-059b-Q3	Water	7/11/2014 10:59:00 AM	2OZP	1	1
N012929-016E / SA-SM-03D-059b-Q3	Water	7/11/2014 9:57:00 AM	2OZP	1	1
N012929-017A / SA-SM-04D-059b-Q3	Water	7/11/2014 8:33:00 AM	2OZP	1	1
N012929-018E / MW-932-059b-Q3	Water	7/11/2014 9:12:00 AM	2OZP	1	1
N012929-019E / SA-SM-04S-059b-Q3	Water	7/11/2014 9:02:00 AM	2OZP	1	1
N012929-020E / CA-MW-103-059b-Q3	Water	7/11/2014 9:07:00 AM	2OZP	1	1
N012929-021E / MW-921-059b-Q3	Water	7/11/2014 9:10:00 AM	2OZP	1	1
N012929-024E / CA-MW-104S-059b-Q3	Water	7/11/2014 11:32:00 AM	2OZP	1	1
N012929-027E / MW-01-059b-Q3	Water	7/11/2014 7:54:00 AM	2OZP	1	1
N012929-028A / SA-SM-05D-059b-Q3	Water	7/11/2014 9:18:00 AM	2OZP	1	1
N012929-029E / SA-SM-05S-059b-Q3	Water	7/11/2014 8:41:00 AM	2OZP	1	1
N012929-030E / SA-SM-07D-059b-Q3	Water	7/11/2014 10:07:00 AM	2OZP	1	1
N012929-031E / SA-SM-07S-059b-Q3	Water	7/11/2014 10:45:00 AM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012929 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7705 9631 7904

Relinquished by: <u>Al Cortes</u> 7/14/14	Date/Time	Received by: _____	Date/Time
	1500		Received by: _____

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012929-008A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.017792 * 1 \\ &= 0.017792\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/28/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012929-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 5.8915 * 5 \\ &= 29.4575\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 29$$

 7/25/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012929-012C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.164 * 2 \\ &= 2.328 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 2.3$$

 7/25/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012929-027D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [1.43670] [1] - 0.06210$$

$$\text{TOC} = 1.37460$$

Reporting results in two significant figures,

$$\text{TOC} = \mathbf{1.40} \text{ mg/L}$$

PS 7/28/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012929-011B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 5.597320078 * 1 * (25/25) \\ &= 5.597320078 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Iron, mg/L} = 5.6$$

 7/25/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012929
Test Method: EPA 6010
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46041

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012916-002B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012929
Test Method: EPA 6010
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46042

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012929-011B-DT 5X	Iron	mg/L	5.728277165	PASS	5.597320078	2.34%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012916-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94121						
Client ID: ZZZZZ	Batch ID: 46041	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804522							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	5.078	0.040	5.000	0	102	80	120				
------	-------	-------	-------	---	-----	----	-----	--	--	--	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012929-011B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94121						
Client ID: ZZZZZ	Batch ID: 46042	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/14/2014	SeqNo: 1804554						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10.472	0.040	5.000	5.597	97.5	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012929-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 2.45675364267052 * 1 * (25/25) \\ &= 2.45675364267052 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 2.5$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012929
Test Method: EPA 6020
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46039

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to As, Mn & Cr. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012930-001B-DT 5X	Chromium	µg/L	0.213501544	NA	0.204628541	4.34%	10
N012930-001B-DT 5X	Arsenic	µg/L	1.549998682	NA	1.728757392	10.34%	10
N012930-001B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012929
Test Method: EPA 6020
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46040

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012929-019B-DT 5X	Chromium	µg/L	0.89803587	NA	0.76924686	16.74%	10
N012929-019B-DT 5X	Arsenic	µg/L	7.969406908	PASS	7.883482455	1.09%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012929
Test Method: EPA 6020
Analysis Date: 7/15/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46040

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012929-019B-DT 125X	Manganese	µg/L	1886.196745	PASS	1880.325837	0.31%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012930-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.064	2.0	20.00	0.2046	99.3	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012929-019B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.980	2.0	20.00	0.7692	96.1	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012930-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.829	0.20	20.00	1.729	106	80	120				
Manganese	198.097	1.0	200.0	0	99.0	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N012929
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012929-019B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1805044						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	29.120	0.20	20.00	7.883	106	80	120				

Sample ID: N012929-019B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46040	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/15/2014	SeqNo: 1805162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	4501.255	12	2500	1880	105	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 21, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012930

RE: PGE Hinkley, 492584.UR.DM.FW


Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 11, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012930

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012930
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012930-001A	06-18-059-Q3	Groundwater	7/11/2014 8:15:00 AM	7/11/2014	7/21/2014
N012930-001B	06-18-059-Q3	Groundwater	7/11/2014 8:15:00 AM	7/11/2014	7/21/2014
N012930-002A	34-13-059-Q3	Groundwater	7/11/2014 10:26:00 AM	7/11/2014	7/21/2014
N012930-002B	34-13-059-Q3	Groundwater	7/11/2014 10:26:00 AM	7/11/2014	7/21/2014
N012930-003A	23-07-059-Q3	Groundwater	7/11/2014 1:05:00 PM	7/11/2014	7/21/2014
N012930-003B	23-07-059-Q3	Groundwater	7/11/2014 1:05:00 PM	7/11/2014	7/21/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012930-001

Client Sample ID: 06-18-059-Q3
Collection Date: 7/11/2014 8:15:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140717A	QC Batch: R94170				PrepDate		Analyst: RB
Hexavalent Chromium	0.14	0.012	0.060		µg/L	1	7/17/2014 05:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/15/2014 11:39 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/14/2014 11:39 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012930-002

Client Sample ID: 34-13-059-Q3
Collection Date: 7/11/2014 10:26:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.46	0.016	0.20		µg/L	1	7/15/2014 11:49 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/14/2014 12:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012930-003

Client Sample ID: 23-07-059-Q3
Collection Date: 7/11/2014 1:05:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/15/2014 11:58 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140714A	QC Batch: 46039				PrepDate	7/14/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/14/2014 12:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94170	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: PBW	Batch ID: R94170	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807058						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94170	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: LCSW	Batch ID: R94170	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807059						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.188 0.060 0.2000 0 93.8 90 110

Sample ID N012947-025ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: ZZZZZ	Batch ID: R94170	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807061						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060 0 0 20

Sample ID N012947-025AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: ZZZZZ	Batch ID: R94170	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807062						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.199 0.060 0.2000 0 99.7 90 110

Sample ID N012947-026AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: ZZZZZ	Batch ID: R94170	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.193 0.060 0.2000 0 96.3 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012947-026AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: ZZZZZZ	Batch ID: R94170	TestNo: EPA 218.6	Analysis Date: 7/17/2014	SeqNo: 1807065							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.190	0.060	0.2000	0	94.9	90	110	0.1926	1.46	20	

Sample ID N012930-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94170						
Client ID: ZZZZZZ	Batch ID: R94170	TestNo: EPA 218.6	Analysis Date: 7/17/2014	SeqNo: 1807095							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.319	0.060	0.2000	0.1393	90.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94141	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: PBW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
---------------------	----	------	--	--	--	--	--	--	--	--	--

Sample ID LCS-R94141	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: LCSW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805377						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.980	0.20	5.000	0	99.6	90	110				
---------------------	-------	------	-------	---	------	----	-----	--	--	--	--

Sample ID N012942-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805379						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.666	0.20						1.649	1.01	20	
---------------------	-------	------	--	--	--	--	--	-------	------	----	--

Sample ID N012942-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.611	0.20	1.000	1.649	96.2	90	110				
---------------------	-------	------	-------	-------	------	----	-----	--	--	--	--

Sample ID N012942-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.624	0.20	1.000	1.649	97.5	90	110	2.611	0.485	20	
---------------------	-------	------	-------	-------	------	----	-----	-------	-------	----	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012930-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805405						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.106	0.20	1.000	0.1105	99.5	90	110				

Sample ID N012930-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.4562	106	90	110				

Sample ID N012930-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805409						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.949	0.20	1.000	2.030	91.9	90	110				

Sample ID N012946-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805410						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N012946-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805411						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.795	0.20	1.000	0.8190	97.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012946-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805412						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.760	0.20	1.000	0.6693	109	90	110				

Sample ID N012946-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.831	0.20	1.000	1.769	106	90	110				

Sample ID N012946-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805414						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.655	0.20	1.000	0.5809	107	90	110				

Sample ID N012943-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.303	0.20	1.000	2.232	107	90	110				

Sample ID N012943-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805416						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.5112	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.986	0.20	1.000	0.9286	106	90	110				

Sample ID N012943-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.478	0.20	1.000	0.4455	103	90	110				

Sample ID N012943-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.223	0.20	1.000	2.123	110	90	110				

Sample ID N012943-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.251	0.20	1.000	2.175	108	90	110				

Sample ID N012943-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.497	0.20	1.000	0.4128	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46039	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: PBW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46039	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: LCSW	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.272 1.0 10.00 0 103 85 115

Sample ID N012930-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804940						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.365 1.0 10.00 0.2046 102 75 125

Sample ID N012930-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/14/2014	RunNo: 94139						
Client ID: ZZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804941						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.222 1.0 10.00 0.2046 100 75 125 10.37 1.39 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/11/2014 Workorder: N012930
 Rep sample Temp (Deg C): 3.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/14/14

Reviewed By:

gog 07/14/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012930-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.139333 * 1 \\ &= 0.139333\end{aligned}$$

Reporting results in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.14$$

 7/21/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012930-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.4562 * 1 \\ &= 0.4562\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.46}$$

 7/17/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012930-003B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.44001612829721 * 1 * (25/25) \\ &= 2.44001612829721 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.4$$



7/17/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012930
Test Method: EPA 6020
Analysis Date: 7/14/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46039

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012930-001B-DT 5X	Chromium	µg/L	0.213501544	NA	0.204628541	4.34%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012930
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012930-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94139						
Client ID: ZZZZZ	Batch ID: 46039	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/14/2014	SeqNo: 1804939						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.064	2.0	20.00	0.2046	99.3	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 21, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012943

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 14, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012943

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 21-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012943
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012943-001A	15-13-059-Q3	Groundwater	7/14/2014 10:33:00 AM	7/14/2014	7/21/2014
N012943-001B	15-13-059-Q3	Groundwater	7/14/2014 10:33:00 AM	7/14/2014	7/21/2014
N012943-002A	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/21/2014
N012943-002B	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/21/2014
N012943-003A	02-07-059-Q3	Groundwater	7/14/2014 10:19:00 AM	7/14/2014	7/21/2014
N012943-003B	02-07-059-Q3	Groundwater	7/14/2014 10:19:00 AM	7/14/2014	7/21/2014
N012943-004A	02-02A-059-Q3	Groundwater	7/14/2014 11:04:00 AM	7/14/2014	7/21/2014
N012943-004B	02-02A-059-Q3	Groundwater	7/14/2014 11:04:00 AM	7/14/2014	7/21/2014
N012943-005A	02-02B-059-Q3	Groundwater	7/14/2014 11:32:00 AM	7/14/2014	7/21/2014
N012943-005B	02-02B-059-Q3	Groundwater	7/14/2014 11:32:00 AM	7/14/2014	7/21/2014
N012943-006A	99-01-059-Q3	Groundwater	7/14/2014 11:52:00 AM	7/14/2014	7/21/2014
N012943-006B	99-01-059-Q3	Groundwater	7/14/2014 11:52:00 AM	7/14/2014	7/21/2014
N012943-007A	02-23-059-Q3	Groundwater	7/14/2014 12:42:00 PM	7/14/2014	7/21/2014
N012943-007B	02-23-059-Q3	Groundwater	7/14/2014 12:42:00 PM	7/14/2014	7/21/2014
N012943-008A	22-48-059-Q3	Groundwater	7/14/2014 12:44:00 PM	7/14/2014	7/21/2014
N012943-008B	22-48-059-Q3	Groundwater	7/14/2014 12:44:00 PM	7/14/2014	7/21/2014
N012943-009A	99-07-059-Q3	Groundwater	7/14/2014 12:54:00 PM	7/14/2014	7/21/2014
N012943-009B	99-07-059-Q3	Groundwater	7/14/2014 12:54:00 PM	7/14/2014	7/21/2014
N012943-010A	03-14-059-Q3	Groundwater	7/14/2014 1:38:00 PM	7/14/2014	7/21/2014
N012943-010B	03-14-059-Q3	Groundwater	7/14/2014 1:38:00 PM	7/14/2014	7/21/2014
N012943-011A	03-19-059-Q3	Groundwater	7/14/2014 1:19:00 PM	7/14/2014	7/21/2014
N012943-011B	03-19-059-Q3	Groundwater	7/14/2014 1:19:00 PM	7/14/2014	7/21/2014
N012943-012A	99-02-059-Q3	Groundwater	7/14/2014 1:39:00 PM	7/14/2014	7/21/2014
N012943-012B	99-02-059-Q3	Groundwater	7/14/2014 1:39:00 PM	7/14/2014	7/21/2014
N012943-013A	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/21/2014
N012943-013B	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/21/2014
N012943-014A	99-17-059-Q3	Groundwater	7/14/2014 4:55:00 PM	7/14/2014	7/21/2014
N012943-014B	99-17-059-Q3	Groundwater	7/14/2014 4:55:00 PM	7/14/2014	7/21/2014
N012943-015A	28-09-059-Q3	Groundwater	7/14/2014 2:27:00 PM	7/14/2014	7/21/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012943
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012943-015B	28-09-059-Q3	Groundwater	7/14/2014 2:27:00 PM	7/14/2014	7/21/2014
N012943-016A	99-13-059-Q3	Groundwater	7/14/2014 2:47:00 PM	7/14/2014	7/21/2014
N012943-016B	99-13-059-Q3	Groundwater	7/14/2014 2:47:00 PM	7/14/2014	7/21/2014
N012943-017A	33-10-059-Q3	Groundwater	7/14/2014 3:32:00 PM	7/14/2014	7/21/2014
N012943-017B	33-10-059-Q3	Groundwater	7/14/2014 3:32:00 PM	7/14/2014	7/21/2014
N012943-018A	27N-01-059-Q3	Groundwater	7/14/2014 3:40:00 PM	7/14/2014	7/21/2014
N012943-018B	27N-01-059-Q3	Groundwater	7/14/2014 3:40:00 PM	7/14/2014	7/21/2014
N012943-019A	34-22-059-Q3	Groundwater	7/14/2014 4:06:00 PM	7/14/2014	7/21/2014
N012943-019B	34-22-059-Q3	Groundwater	7/14/2014 4:06:00 PM	7/14/2014	7/21/2014
N012943-020A	34-24-059-Q3	Groundwater	7/14/2014 4:27:00 PM	7/14/2014	7/21/2014
N012943-020B	34-24-059-Q3	Groundwater	7/14/2014 4:27:00 PM	7/14/2014	7/21/2014
N012943-021A	34-50-059-Q3	Groundwater	7/14/2014 4:45:00 PM	7/14/2014	7/21/2014
N012943-021B	34-50-059-Q3	Groundwater	7/14/2014 4:45:00 PM	7/14/2014	7/21/2014



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 15-13-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 10:33:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/15/2014 01:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/16/2014 12:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-82-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 11:50:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.51	0.016	0.20		µg/L	1	7/15/2014 02:01 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 01:17 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 02-07-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 10:19:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.93	0.016	0.20		µg/L	1	7/15/2014 02:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 01:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-004

Client Sample ID: 02-02A-059-Q3
Collection Date: 7/14/2014 11:04:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.45	0.016	0.20		µg/L	1	7/15/2014 02:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 02-02B-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 11:32:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/15/2014 02:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/16/2014 01:45 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-01-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 11:52:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/15/2014 02:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/16/2014 01:50 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 02-23-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 12:42:00 PM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.41	0.016	0.20		µg/L	1	7/15/2014 03:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 01:56 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-48-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 12:44:00 PM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/15/2014 07:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/16/2014 02:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-009

Client Sample ID: 99-07-059-Q3
Collection Date: 7/14/2014 12:54:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/15/2014 08:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/16/2014 02:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-010

Client Sample ID: 03-14-059-Q3
Collection Date: 7/14/2014 1:38:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/17/2014 06:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/16/2014 02:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-011

Client Sample ID: 03-19-059-Q3
Collection Date: 7/14/2014 1:19:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	1.0	0.016	0.20		µg/L	1	7/15/2014 08:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/16/2014 02:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-012

Client Sample ID: 99-02-059-Q3
Collection Date: 7/14/2014 1:39:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	0.97	0.016	0.20		µg/L	1	7/15/2014 09:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/16/2014 02:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-013

Client Sample ID: 22-81-059-Q3
Collection Date: 7/14/2014 1:25:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/15/2014 09:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/16/2014 02:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-17-059-Q3
Lab Order: N012943	Collection Date: 7/14/2014 4:55:00 PM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012943-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	0.96	0.016	0.20		µg/L	1	7/15/2014 10:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 02:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-015

Client Sample ID: 28-09-059-Q3
Collection Date: 7/14/2014 2:27:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/15/2014 10:26 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/16/2014 02:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-016

Client Sample ID: 99-13-059-Q3
Collection Date: 7/14/2014 2:47:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/15/2014 10:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/16/2014 02:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-017

Client Sample ID: 33-10-059-Q3
Collection Date: 7/14/2014 3:32:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	0.66	0.016	0.20		µg/L	1	7/15/2014 11:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 03:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-018

Client Sample ID: 27N-01-059-Q3
Collection Date: 7/14/2014 3:40:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/15/2014 11:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/16/2014 03:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-019

Client Sample ID: 34-22-059-Q3
Collection Date: 7/14/2014 4:06:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140717B	QC Batch: R94197				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/17/2014 07:51 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/16/2014

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 03:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Jul-14

CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-020

Client Sample ID: 34-24-059-Q3
Collection Date: 7/14/2014 4:27:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140717B	QC Batch: R94197				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/17/2014 08:41 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/16/2014 12:19 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46061				PrepDate	7/16/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/16/2014 03:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012943-021

Client Sample ID: 34-50-059-Q3
Collection Date: 7/14/2014 4:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715B	QC Batch: R94142				PrepDate		Analyst: RB
Hexavalent Chromium	0.97	0.016	0.20		µg/L	1	7/16/2014 12:38 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140716A	QC Batch: 46062				PrepDate	7/16/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/16/2014 03:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94197	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: PBW	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807924
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94197	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: LCSW	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807925
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.194	0.060	0.2000	0	96.8 90 110

Sample ID N012943-019ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807927
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			0 0 20

Sample ID N012943-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807928
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.208	0.060	0.2000	0	104 90 110

Sample ID N012943-020AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807930
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012943-020AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197						
Client ID: ZZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.201	0.060	0.2000	0	100	90	110	0.2058	2.40	20	

Sample ID N012946-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197						
Client ID: ZZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807933						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0.01538	98.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94141	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: PBW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94141	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: LCSW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805377						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.980	0.20	5.000	0	99.6	90	110				
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Sample ID N012942-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805379						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.666	0.20						1.649	1.01	20	
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Sample ID N012942-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.611	0.20	1.000	1.649	96.2	90	110				
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Sample ID N012942-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.624	0.20	1.000	1.649	97.5	90	110	2.611	0.485	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012930-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805405						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.106	0.20	1.000	0.1105	99.5	90	110				

Sample ID N012930-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.4562	106	90	110				

Sample ID N012930-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805409						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.949	0.20	1.000	2.030	91.9	90	110				

Sample ID N012946-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805410						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N012946-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805411						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.795	0.20	1.000	0.8190	97.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012946-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805412						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.760	0.20	1.000	0.6693	109	90	110				

Sample ID N012946-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.831	0.20	1.000	1.769	106	90	110				

Sample ID N012946-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805414						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.655	0.20	1.000	0.5809	107	90	110				

Sample ID N012943-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.303	0.20	1.000	2.232	107	90	110				

Sample ID N012943-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805416						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.5112	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.986	0.20	1.000	0.9286	106	90	110				

Sample ID N012943-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.478	0.20	1.000	0.4455	103	90	110				

Sample ID N012943-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.223	0.20	1.000	2.123	110	90	110				

Sample ID N012943-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.251	0.20	1.000	2.175	108	90	110				

Sample ID N012943-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.497	0.20	1.000	0.4128	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID LCS-R94142	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: LCSW	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805434						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.936	0.20	5.000	0	98.7	90	110				

Sample ID MB-R94142	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: PBW	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805435						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID N012943-008A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805437						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.516	0.20						1.467	3.31	20	

Sample ID N012943-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805438						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.496	0.20	1.000	1.467	103	90	110				

Sample ID N012943-008A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805439						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.547	0.20	1.000	1.467	108	90	110	2.496	2.00	20	

Qualifiers:

- | | | |
|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012943
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805443						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.468	0.20	1.000	1.415	105	90	110				

Sample ID N012943-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805445						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.937	0.20	1.000	1.007	93.0	90	110				

Sample ID N012943-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805447						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.003	0.20	1.000	0.9695	103	90	110				

Sample ID N012943-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805449						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.304	0.20	1.000	1.330	97.4	90	110				

Sample ID N012943-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.878	0.20	1.000	0.9584	92.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.124	0.20	1.000	2.119	101	90	110				

Sample ID N012943-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805457						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.148	0.20	1.000	2.144	100	90	110				

Sample ID N012943-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.643	0.20	1.000	0.6628	98.0	90	110				

Sample ID N012943-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805461						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.938	0.20	1.000	1.999	93.8	90	110				

Sample ID N012943-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1805465						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.970	0.20	1.000	0	97.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1805467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				
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Sample ID N012943-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1805469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.894	0.20	1.000	0.9689	92.5	90	110				
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Sample ID N012914-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94142						
Client ID: ZZZZZZ	Batch ID: R94142	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1805473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.979	0.20	1.000	0.04590	93.3	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94201	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: PBW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808249						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94201	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: LCSW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808250						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.032	0.20	5.000	0	101	90	110				
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Sample ID N012952-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.038	0.20						0	0	20	
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Sample ID N012952-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.089	0.20	1.000	0	109	90	110				
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Sample ID N012952-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.089	0.20	1.000	0	109	90	110	1.089	0	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.724	0.20	5.000	5.736	99.7	90	110				

Sample ID N012952-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808258						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.831	0.20	5.000	2.782	101	90	110				

Sample ID N012952-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808262						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.864	0.20	5.000	2.825	101	90	110				

Sample ID N012952-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808264						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.116	0.20	1.000	0.06470	105	90	110				

Sample ID N012952-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808266						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.075	0.20	1.000	0	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0.06200	99.7	90	110				

Sample ID N012952-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0.05260	103	90	110				

Sample ID N012952-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808274						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.040	0.20	1.000	0.04010	100	90	110				

Sample ID N012952-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.098	0.20	1.000	0	110	90	110				

Sample ID N012952-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808278						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.067	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.071	0.20	1.000	0	107	90	110				

Sample ID N012952-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.022	0.20	5.000	1.935	102	90	110				

Sample ID N012952-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.861	0.20	1.000	1.864	99.7	90	110				

Sample ID N012952-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808288						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.514	0.20	1.000	0.4568	106	90	110				

Sample ID N012952-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808290						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.461	0.20	1.000	2.471	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.299	0.20	1.000	2.272	103	90	110				

Sample ID N012943-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808294						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.608	0.20	1.000	1.600	101	90	110				

Sample ID N012966-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808298						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.911	0.20	5.000	6.990	98.4	90	110				

Sample ID N012966-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808300						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.191	0.20	5.000	8.127	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46061	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: PBW	Batch ID: 46061	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806232						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46061	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: LCSW	Batch ID: 46061	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806233						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.299 1.0 10.00 0 103 85 115

Sample ID N012943-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: ZZZZZZ	Batch ID: 46061	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.355 1.0 10.00 2.543 98.1 75 125

Sample ID N012943-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: ZZZZZZ	Batch ID: 46061	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806238						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.188 1.0 10.00 2.543 96.4 75 125 12.35 1.36 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46062	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: PBW	Batch ID: 46062	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806262						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46062	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: LCSW	Batch ID: 46062	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806263						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.151 1.0 10.00 0 102 85 115

Sample ID N012943-021B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: ZZZZZZ	Batch ID: 46062	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806269						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.047 1.0 10.00 1.039 100 75 125

Sample ID N012943-021B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/16/2014	RunNo: 94156						
Client ID: ZZZZZZ	Batch ID: 46062	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.066 1.0 10.00 1.039 100 75 125 11.05 0.173 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly, 500 ml Poly Preservatives: (NH4)2SO4, NH4OH, 4°C, HNO3, 4°C Filtered: Field, Field Holding Time (days): 28, 180		CR(M) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix						
15-13-059-Q3	7/14/14	1033	GW	X	X	NO/2943-1	RC	2	Cooke
22-82-059-Q3	7/14/14	1150	GW	X	X	-2	RC	2	Barnes
02-07-059-Q3	7/14/14	1019	GW	X	X	-3	JM	2	Ray
02-02A-059-Q3	7/14/14	1104	GW	X	X	-4	JM	2	Marcum
02-02B-059-Q3	7/14/14	1132	GW	X	X	-5	JM	2	Marcum
99-01-059-Q3	7/14/14	1152	GW	X	X	-6	JM	2	
02-23-059-Q3	7/14/14	1242	GW	X	X	-7	JM	2	Hewitt
22-48-059-Q3	7/14/14	1244	GW	X	X	-8	RC	2	Jordan
99-07-059-Q3	7/14/14	1254	GW	X	X	-9	RC	2	
03-14-059-Q3	7/14/14	1338	GW	X	X	-10	JM	2	Lewis
03-19-059-Q3	7/14/14	1319	GW	X	X	-11	JM	2	Lewis
99-02-059-Q3	7/14/14	1339	GW	X	X	-12	JM	2	
22-81-059-Q3	7/14/14	1325	GW	X	X	-13	RC	2	Hsu
99-17-059-Q3	7/14/14	1655	GW	X	X	-14	RC	2	
28-09-059-Q3	7/14/14	1427	GW	X	X	-15	JM	2	Turner
TOTAL NUMBER OF CONTAINERS								30	

Approved by <i>H. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/14/14 1810 7-14-14 1811 7-14-14 1811 7/14/14 1814 7/14/14 2100	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>S-90</i> Airbill No: <i>1R#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Containers: 250 ml Poly (NH4)2, SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C		Preservatives:		Filtered: Field Field		Holding Time (days): 28 180		Metals Dissolved (6020AFF) FF Cr	Cr(VI) (E218.6) FF	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix												
99-13-059-Q3	7/14/14	1447	GW	X	X								JM 2		
33-10-059-Q3	7/14/14	1532	GW	X	X								JM 2	Fletcher	
27N-01-059-Q3	7/14/14	1540	GW	X	X								RC 2	Harper	
34-22-059-Q3	7/14/14	1606	GW	X	X								JM 2	Quass	
34-24-059-Q3	7/14/14	1627	GW	X	X								JM 2	Quass	
34-50-059-Q3	7/14/14	1645	GW	X	X								RC 2	Luna	
												TOTAL NUMBER OF CONTAINERS	12		

Approved by <i>H. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/14/14 1810 7-14-14 1811 7-14-14 1811 7/14/14 1814 7/14/14 2100 7/14/14 2100	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <i>306 U</i> Airbill No: <i>[Signature]</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/14/2014 Workorder: N012943
 Rep sample Temp (Deg C): 3.4/3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/>
Yes <input type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>
NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: AC For: *MBC* 7/15/2014

Reviewed By: *[Signature]* 07/17/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012943-019A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/21/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012943-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 2.2322 * 1 \\ &= 2.2322\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.2$$

 7/21/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012943-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.54300969010789 * 1 * (25/25) \\ &= 2.54300969010789 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.5$$

 7/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012943
Test Method: EPA 6020
Analysis Date: 7/16/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46061

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012943-001B-DT 5X	Chromium	µg/L	2.474264329	NA	2.54300969	2.70%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012943
Test Method: EPA 6020
Analysis Date: 7/16/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46062

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012943-021B-DT 5X	Chromium	µg/L	1.037755591	NA	1.03883719	0.10%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012943-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94156						
Client ID: ZZZZZ	Batch ID: 46061	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806236							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	23.388	2.0	20.00	2.543	104	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012943
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012943-021B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94156						
Client ID: ZZZZZ	Batch ID: 46062	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/16/2014	SeqNo: 1806268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.140	2.0	20.00	1.039	101	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 28, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012944

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 14, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012944

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012944
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012944-001A	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/28/2014
N012944-001B	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/28/2014
N012944-001C	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/28/2014
N012944-001D	22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	7/14/2014	7/28/2014
N012944-002A	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/28/2014
N012944-002B	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/28/2014
N012944-002C	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/28/2014
N012944-002D	22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	7/14/2014	7/28/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-82-059-Q3
Lab Order: N012944	Collection Date: 7/14/2014 11:50:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012944-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	650	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** 22-81-059-Q3
Lab Order: N012944 **Collection Date:** 7/14/2014 1:25:00 PM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012944-002

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140717E** QC Batch: **46081** PrepDate: **7/17/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 430 10 10 mg/L 1 7/17/2014 08:15 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012944
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46081	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: PBW	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46081	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: LCSW	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807659						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		941.000	10	1000	0	94.1	80	120			

Sample ID N012944-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: ZZZZZ	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		655.000	10					653.0	0.306	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-82-059-Q3
Lab Order: N012944	Collection Date: 7/14/2014 11:50:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012944-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	8.6	0.011	0.67	pCi/L	1	7/15/2014 07:09 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-81-059-Q3
Lab Order: N012944	Collection Date: 7/14/2014 1:25:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012944-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140715A	QC Batch: 46054			PrepDate	7/15/2014	Analyst: CEI
Uranium	7.6	0.011	0.67	pCi/L	1	7/15/2014 07:15 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012944
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46054	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: PBW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805270
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46054	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: LCSW	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805271
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.320	0.67	6.700	0	109 85 115

Sample ID N012907-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805275
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	8.297	0.67	6.700	0.7250	113 75 125

Sample ID N012907-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805276
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	8.459	0.67	6.700	0.7250	115 75 125 8.297 1.93 20

Sample ID N012944-002A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/15/2014	RunNo: 94140
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8		Analysis Date: 7/15/2014	SeqNo: 1805680
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	15.490	0.67	6.700	7.552	118 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-82-059-Q3
Lab Order: N012944	Collection Date: 7/14/2014 11:50:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012944-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154			PrepDate			Analyst: PS
Nitrate as N	11	0.051	0.50		mg/L	10	7/15/2014 01:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-81-059-Q3
Lab Order: N012944	Collection Date: 7/14/2014 1:25:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012944-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140715A	QC Batch: R94154			PrepDate		Analyst: PS
Nitrate as N	3.9	0.026	0.25	mg/L	5	7/15/2014 11:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012944
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94154_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94154
Client ID: PBW	Batch ID: R94154	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806140
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrate as N	ND	0.050			

Sample ID LCS-R94154_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94154
Client ID: LCSW	Batch ID: R94154	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806141
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrate as N	1.044	0.050	1.000	0	104 90 110

Sample ID N012947-009C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94154
Client ID: ZZZZZ	Batch ID: R94154	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806150
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrate as N	10.470	0.50			10.42 0.479 20

Sample ID N012947-009C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94154
Client ID: ZZZZZ	Batch ID: R94154	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806151
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrate as N	20.800	0.50	10.00	10.42	104 80 120

Sample ID N012947-009C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94154
Client ID: ZZZZZ	Batch ID: R94154	TestNo: EPA 300.0		Analysis Date: 7/15/2014	SeqNo: 1806152
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Nitrate as N	20.740	0.50	10.00	10.42	103 80 120 20.80 0.289 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.AU Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: Preservatives: Filtered: Holding Time (days):	500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C 2x1000 ml Poly HNO3 Field Field Field Field NA NA NA 180 180 180 2 7 28 180 Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As, Mn Uranium (E200.8FF) FF Anions (E300.0) FF NO3N TDS (SM2540C) TOC (E5310) Gross Alpha/Beta (SM710B/E300)	Number of Containers COMMENTS						
SAMPLE ID	DATE	TIME	Matrix									
22-82-059-Q3	7/14/14	1150	GW			X	X	X		X	No 12944-1	RC 5 Barnes
22-81-059-Q3	7/14/14	1325	GW			X	X	X		X	1-2	RC 5 Hsu
TOTAL NUMBER OF CONTAINERS											10	

Approved by <u>H. Blew</u> Sampled by <u>R. Carmona</u> Relinquished by <u>R. Carmona</u> Received by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u>	Signatures Date/Time 7/14/14 1810 07/14/14 1812 07/14/14 1814 7/14/14 1814 7/14/14 2100	Shipping Details Method of Shipment: On Ice: <u>yes</u> / no 3-6°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/14/2014 Workorder: N012944
 Rep sample Temp (Deg C): 3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: AC For: *MBC* 7/15/2014

Reviewed By: *[Signature]* 07/17/14



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TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Signed

16-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012944-001D / 22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	32OZP	1		
N012944-002D / 22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012944 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 1710 9199

	Date/Time		Date/Time
Relinquished by: <i>ACortez</i> 7/16/2014	1500	Received by: _____	
Relinquished by: _____		Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL


For N012944-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0623-63.9970)*1000000}{100}$$

653 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 650 \text{ mg/L}$$


7/18/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/17/2014								TDS/CONDUCTIVITY
Date Finished: 7/18/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46081	100	63.3751	63.3751	0	1	0.00		
LCS-46081	100	63.5095	63.6036	941	1	941.00		
N012944-001C	100	63.997	64.0623	653	1	653.00	1045	0.62
N012944-001C-DUP	100	63.9763	64.0418	655	1	655.00	1045	0.63
N012944-002C	100	64.1093	64.1527	434	1	434.00	741	0.59
N012946-002C	100	63.7803	63.8315	512	1	512.00	803	0.64
N012946-003C	100	62.9956	63.0195	239	1	239.00	428	0.56
N012946-004C	100	61.3632	61.3908	276	1	276.00	431	0.64
N012947-023C	65	64.2779	64.3639	860	1.5384615	1323.08	2240	0.59
N012947-024C	70	63.8043	63.9059	1016	1.4285714	1451.43	2130	0.68
N012953-001C	100	61.7315	61.7851	536	1	536.00	874	0.61
N012953-002C	100	60.6396	60.7127	731	1	731.00	1133	0.65
N012963-011C	100	64.2568	64.2998	430	1	430.00	647	0.66
N012963-012C	100	58.3031	58.3475	444	1	444.00	651	0.68

mer
7/18/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N012944-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 12.831822437 * 1 * (25/25) * 0.67 \\ &= 8.59732103279 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 8.6$$

 7/25/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012944
Test Method: EPA 200
Analysis Date: 7/15/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46054

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012907-001A-DT 5X	Uranium	pCi/L	0.739540154	NA	0.724974072	2.01%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012944
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012907-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94140						
Client ID: ZZZZZ	Batch ID: 46054	TestNo: EPA 200.8	Analysis Date: 7/15/2014	SeqNo: 1805274							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	15.717	1.3	13.40	0.7250	112	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012944-001B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.127 * 10 \\ &= 11.27 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 11$$

 7/28/2014

August 12, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012944
Pace Project No.: 30125514

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012944
Pace Project No.: 30125514

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125514001	N012944-001D /22-82-059-Q3	Water	07/14/14 11:50	07/22/14 09:15
30125514002	N012944-002D /22-81-059-Q3	Water	07/14/14 13:25	07/22/14 09:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012944
Pace Project No.: 30125514

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125514001	N012944-001D /22-82-059-Q3	EPA 900.0	JAL	2
30125514002	N012944-002D /22-81-059-Q3	EPA 900.0	JAL	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012944
Pace Project No.: 30125514

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 12, 2014

General Information:

2 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012944

Pace Project No.: 30125514

QC Batch: RADC/20651

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30125514001, 30125514002

METHOD BLANK: 763860

Matrix: Water

Associated Lab Samples: 30125514001, 30125514002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.037 ± 0.853 (2.23) C:NA T:NA	pCi/L	07/28/14 17:42	
Gross Beta	0.155 ± 0.686 (1.65) C:NA T:NA	pCi/L	07/28/14 17:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.asset-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV **30125514**

Subcontractor: Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601
TEL: 724.850.5600
FAX: 724.850.5601
Acct #: **16-Jul-14**

Field Sampler: Signed

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012944-001D / 22-82-059-Q3	Groundwater	7/14/2014 11:50:00 AM	32OZP	1		001
N012944-002D / 22-81-059-Q3	Groundwater	7/14/2014 1:25:00 PM	32OZP	1		002

General Comments: Please email sample receipt acknowledgement to the PM.
Please use PO#: N012944 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FcdEx#: 7706 1710 9199	
Date/Time	Date/Time
1500	7-22-14 0915
Relinquished by: <i>Alorton</i> 7/16/2014	Received by: <i>Scott Daniels</i>
Relinquished by:	Received by:



Sample Condition Upon Receipt

30125514

Client Name: ATL

Project # _____

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770617109199

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags _____ None _____ Other _____

Thermometer Used NA Type of Ice: Wet Blue: None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: SRA 7-22-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>wt</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>PHLZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>SRA</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Jacobi Date: 7/23/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Project Number: 30125514

Client Name: ATL



Item No.	Matrix Code	Class Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other
100	fm																							
200	fm																							

July 29, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012946

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 14, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012946

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protom, Missouri.



ASSET Laboratories

Date: 29-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012946
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012946-001A	MW-753-059b-Q3	Water	7/14/2014 3:50:00 PM	7/14/2014	7/29/2014
N012946-002A	MW-36-059b-Q3	Water	7/14/2014 4:09:00 PM	7/14/2014	7/29/2014
N012946-002B	MW-36-059b-Q3	Water	7/14/2014 4:09:00 PM	7/14/2014	7/29/2014
N012946-002C	MW-36-059b-Q3	Water	7/14/2014 4:09:00 PM	7/14/2014	7/29/2014
N012946-003A	MW-67A-059b-Q3	Water	7/14/2014 1:19:00 PM	7/14/2014	7/29/2014
N012946-003B	MW-67A-059b-Q3	Water	7/14/2014 1:19:00 PM	7/14/2014	7/29/2014
N012946-003C	MW-67A-059b-Q3	Water	7/14/2014 1:19:00 PM	7/14/2014	7/29/2014
N012946-004A	MW-67B-059b-Q3	Water	7/14/2014 12:35:00 PM	7/14/2014	7/29/2014
N012946-004B	MW-67B-059b-Q3	Water	7/14/2014 12:35:00 PM	7/14/2014	7/29/2014
N012946-004C	MW-67B-059b-Q3	Water	7/14/2014 12:35:00 PM	7/14/2014	7/29/2014
N012946-005A	MW-177D-059b-Q3	Water	7/14/2014 2:15:00 PM	7/14/2014	7/29/2014
N012946-005B	MW-177D-059b-Q3	Water	7/14/2014 2:15:00 PM	7/14/2014	7/29/2014
N012946-005C	MW-177D-059b-Q3	Water	7/14/2014 2:15:00 PM	7/14/2014	7/29/2014
N012946-006A	MW-177S-059b-Q3	Water	7/14/2014 2:51:00 PM	7/14/2014	7/29/2014
N012946-006B	MW-177S-059b-Q3	Water	7/14/2014 2:51:00 PM	7/14/2014	7/29/2014
N012946-006C	MW-177S-059b-Q3	Water	7/14/2014 2:51:00 PM	7/14/2014	7/29/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-002

Client Sample ID: MW-36-059b-Q3
Collection Date: 7/14/2014 4:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	510	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-003

Client Sample ID: MW-67A-059b-Q3
Collection Date: 7/14/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	240	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-004

Client Sample ID: MW-67B-059b-Q3
Collection Date: 7/14/2014 12:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	280	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46081	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: PBW	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46081	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: LCSW	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807659						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		941.000	10	1000	0	94.1	80	120			

Sample ID N012944-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187						
Client ID: ZZZZZ	Batch ID: 46081	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807661						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		655.000	10					653.0	0.306	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-001

Client Sample ID: MW-753-059b-Q3
Collection Date: 7/14/2014 3:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140717B	QC Batch: R94197				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/17/2014 09:13 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/15/2014 12:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-002

Client Sample ID: MW-36-059b-Q3
Collection Date: 7/14/2014 4:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	84	0.16	2.0		µg/L	10	7/15/2014 03:36 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	87	0.030	1.0		µg/L	1	7/17/2014 02:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-003

Client Sample ID: MW-67A-059b-Q3
Collection Date: 7/14/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.82	0.016	0.20		µg/L	1	7/15/2014 01:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/17/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-004

Client Sample ID: MW-67B-059b-Q3
Collection Date: 7/14/2014 12:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	0.67	0.016	0.20		µg/L	1	7/15/2014 01:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/17/2014 02:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-005

Client Sample ID: MW-177D-059b-Q3
Collection Date: 7/14/2014 2:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/15/2014 01:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-006

Client Sample ID: MW-177S-059b-Q3
Collection Date: 7/14/2014 2:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140715A	QC Batch: R94141			PrepDate		Analyst: RB
Hexavalent Chromium	0.58	0.016	0.20	µg/L	1	7/15/2014 01:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94197	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: PBW	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807924
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94197	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: LCSW	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807925
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.194 0.060 0.2000 0 96.8 90 110

Sample ID N012943-019ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807927
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium ND 0.060 0 0 20

Sample ID N012943-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807928
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.208 0.060 0.2000 0 104 90 110

Sample ID N012943-020AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197
Client ID: ZZZZZ	Batch ID: R94197	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807930
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.206 0.060 0.2000 0 103 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012943-020AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197						
Client ID: ZZZZZZ	Batch ID: R94197	TestNo: EPA 218.6	Analysis Date: 7/17/2014	SeqNo: 1807931							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.201	0.060	0.2000	0	100	90	110	0.2058	2.40	20	

Sample ID N012946-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94197						
Client ID: ZZZZZZ	Batch ID: R94197	TestNo: EPA 218.6	Analysis Date: 7/17/2014	SeqNo: 1807933							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0.01538	98.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94141	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: PBW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805376						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94141	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: LCSW	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805377						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.980	0.20	5.000	0	99.6	90	110				
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Sample ID N012942-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805379						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.666	0.20						1.649	1.01	20	
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Sample ID N012942-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.611	0.20	1.000	1.649	96.2	90	110				
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Sample ID N012942-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.624	0.20	1.000	1.649	97.5	90	110	2.611	0.485	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012930-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805405						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.106	0.20	1.000	0.1105	99.5	90	110				

Sample ID N012930-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.4562	106	90	110				

Sample ID N012930-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805409						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.949	0.20	1.000	2.030	91.9	90	110				

Sample ID N012946-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805410						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N012946-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805411						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.795	0.20	1.000	0.8190	97.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012946-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805412						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.760	0.20	1.000	0.6693	109	90	110				

Sample ID N012946-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.831	0.20	1.000	1.769	106	90	110				

Sample ID N012946-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805414						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.655	0.20	1.000	0.5809	107	90	110				

Sample ID N012943-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.303	0.20	1.000	2.232	107	90	110				

Sample ID N012943-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805416						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.513	0.20	1.000	0.5112	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012943-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.986	0.20	1.000	0.9286	106	90	110				

Sample ID N012943-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805418						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.478	0.20	1.000	0.4455	103	90	110				

Sample ID N012943-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.223	0.20	1.000	2.123	110	90	110				

Sample ID N012943-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.251	0.20	1.000	2.175	108	90	110				

Sample ID N012943-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94141						
Client ID: ZZZZZZ	Batch ID: R94141	TestNo: EPA 218.6		Analysis Date: 7/15/2014	SeqNo: 1805423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.497	0.20	1.000	0.4128	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46077	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: PBW	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806750						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46077	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: LCSW	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.010 1.0 10.00 0 100 85 115

Sample ID N012954-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: ZZZZZZ	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.282 1.0 10.00 0.8578 84.2 75 125

Sample ID N012954-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: ZZZZZZ	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806756						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.445 1.0 10.00 0.8578 95.9 75 125 9.282 11.8 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-002

Client Sample ID: MW-36-059b-Q3
Collection Date: 7/14/2014 4:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076			PrepDate	7/17/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/17/2014 11:18 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
 Lab Order: N012946
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012946-003

Client Sample ID: MW-67A-059b-Q3
 Collection Date: 7/14/2014 1:19:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076			PrepDate	7/17/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/17/2014 11:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-67B-059b-Q3
Lab Order: N012946	Collection Date: 7/14/2014 12:35:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012946-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/17/2014 11:44 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46076	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: PBW	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806619
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	ND	0.020			
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Sample ID LCS-46076	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: LCSW	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806620
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.092	0.020	0.1000	0	92.1 85 115
------	-------	-------	--------	---	-------------

Sample ID N012946-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: ZZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806624
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.103	0.020	0.1000	0.003199	99.6 75 125
------	-------	-------	--------	----------	-------------

Sample ID N012946-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: ZZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806625
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.108	0.020	0.1000	0.003199	105 75 125 0.1028 4.89 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-002

Client Sample ID: MW-36-059b-Q3
Collection Date: 7/14/2014 4:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077			PrepDate	7/17/2014	Analyst: CEI	
Arsenic	1.7	0.027	0.10	µg/L	1	7/17/2014 02:25 PM	
Manganese	ND	0.026	0.50	µg/L	1	7/17/2014 02:25 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-003

Client Sample ID: MW-67A-059b-Q3
Collection Date: 7/14/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Arsenic	1.9	0.027	0.10		µg/L	1	7/17/2014 02:30 PM
Manganese	ND	0.026	0.50		µg/L	1	7/17/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-004

Client Sample ID: MW-67B-059b-Q3
Collection Date: 7/14/2014 12:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Arsenic	2.6	0.027	0.10		µg/L	1	7/17/2014 02:36 PM
Manganese	ND	0.026	0.50		µg/L	1	7/17/2014 02:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-005

Client Sample ID: MW-177D-059b-Q3
Collection Date: 7/14/2014 2:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077			PrepDate	7/17/2014	Analyst: CEI	
Manganese	0.52	0.026	0.50	µg/L	1	7/17/2014 02:41 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012946-006

Client Sample ID: MW-177S-059b-Q3
Collection Date: 7/14/2014 2:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Manganese	3.0	0.026	0.50		µg/L	1	7/17/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46077	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168
Client ID: PBW	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806800
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46077	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168
Client ID: LCSW	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806801
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.777	0.10	10.00	0	108 85 115
Manganese	99.696	0.50	100.0	0	99.7 85 115

Sample ID N012954-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168
Client ID: ZZZZZ	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806805
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	18.995	0.10	10.00	9.695	93.0 75 125
Manganese	81.479	0.50	100.0	0	81.5 75 125

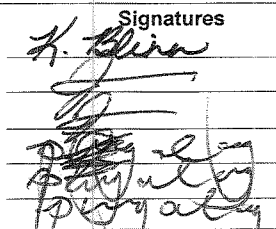
Sample ID N012954-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168
Client ID: ZZZZZ	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806806
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	19.679	0.10	10.00	9.695	99.8 75 125 18.99 3.54 20
Manganese	90.415	0.50	100.0	0	90.4 75 125 81.48 10.4 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 250 ml Poly 500 ml Poly 500 ml Poly 500 ml Poly 1000ml Poly 50ml Centrifug	Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C HNO3, 4°C HNO3, 4°C 4°C 4°C (blue ice)	Filtered: Field Field Field Field NA Field	Holding Time (days): 28 180 180 180 7 7	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As, Cr, Mn Metals Dissolved (6020AFF) FF Mn TDS (SM2540C) Eosine, Fluorescein FF	Number of Containers	COMMENTS		
SAMPLE ID	DATE	TIME	Matrix									
MW-753-059b-Q3	7/14/2014	1550	Water	X						NO 12946-1	1	LB
MW-36-059b-Q3	7/14/2014	1609	Water	X	X	X		X			3	JM
MW-67A-059b-Q3	7/14/2014	1319	Water	X	X	X		X			3	LB
MW-67B-059b-Q3	7/14/2014	1235	Water	X	X	X		X			3	LB
MW-177D-059b-Q3	7/14/2014	1415	Water	X			X		X		3	LB
MW-177S-059b-Q3	7/14/2014	1451	Water	X			X		X		3	LB
									TOTAL NUMBER OF CONTAINERS	16		

Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures 	Date/Time 7/14/14 1645 7/14/14 1645 7/14/14 1645 7/14/14 1700 7/14/14 2100 7/14/14 2100	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 2+80 Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/14/2014 Workorder: N012946
 Rep sample Temp (Deg C): 2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments:

Checklist Completed By: AC For: *MBC* 7/15/2014

Reviewed By: *[Signature]* 07/17/14



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FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protem, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

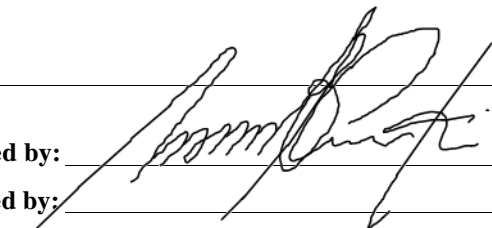
Field Sampler: SIGNED

15-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCEIN
N012946-005C / MW-177D-059b-Q3	Water	7/14/2014 2:15:00 PM	2OZP	1	1
N012946-006C / MW-177S-059b-Q3	Water	7/14/2014 2:51:00 PM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012946 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT

Relinquished by: 	Date/Time	FedEx#: 7706 0972 9166	Date/Time
	7/15/2014 11:08 AM	Received by: _____	_____
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012946-002C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.8315-63.7803)*1000000}{100}$$

512 ~~312~~ mg/L

Reporting result in two significant figures,

$$\text{TDS} = \frac{510}{100} \text{ mg/L}$$

~~200~~
310

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/17/2014								TDS/CONDUCTIVITY
Date Finished: 7/18/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46081	100	63.3751	63.3751	0	1	0.00		
LCS-46081	100	63.5095	63.6036	941	1	941.00		
N012944-001C	100	63.997	64.0623	653	1	653.00	1045	0.62
N012944-001C-DUP	100	63.9763	64.0418	655	1	655.00	1045	0.63
N012944-002C	100	64.1093	64.1527	434	1	434.00	741	0.59
N012946-002C	100	63.7803	63.8315	512	1	512.00	803	0.64
N012946-003C	100	62.9956	63.0195	239	1	239.00	428	0.56
N012946-004C	100	61.3632	61.3908	276	1	276.00	431	0.64
N012947-023C	65	64.2779	64.3639	860	1.5384615	1323.08	2240	0.59
N012947-024C	70	63.8043	63.9059	1016	1.4285714	1451.43	2130	0.68
N012953-001C	100	61.7315	61.7851	536	1	536.00	874	0.61
N012953-002C	100	60.6396	60.7127	731	1	731.00	1133	0.65
N012963-011C	100	64.2568	64.2998	430	1	430.00	647	0.66
N012963-012C	100	58.3031	58.3475	444	1	444.00	651	0.68

Jmer
7/18/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012946-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.015382 * 1 \\ &= 0.015382\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012946-003A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.819 * 1 \\ &= 0.819\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.82}$$

 7/29/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012946-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.003199082088 * 1 * (25/25) \\ &= 0.003199082088 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.0032$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012946
Test Method: EPA 6010
Analysis Date: 7/17/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46076

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012946-002B-DT 5X	Iron	mg/L	0.012933152	NA	0.003199082	304.28%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012946-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94166						
Client ID: ZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806623							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	4.561	0.040	5.000	0.003199	91.2	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012946-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 87.135552122 * 1 * (25/25) \\ &= 87.135552122 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 87$$

 7/28/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012955
Test Method: EPA 6020
Analysis Date: 7/17/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46077

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012954-001B-DT 5X	Chromium	µg/L	0.816053226	NA	0.857808097	4.87%	10
N012954-001B-DT 5X	Arsenic	µg/L	10.02129785	PASS	9.695311442	3.36%	10
N012954-001B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012954-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94168						
Client ID: ZZZZZ	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806754							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.079	2.0	20.00	0.8578	96.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012946
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012954-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94168						
Client ID: ZZZZZ	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806804						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	30.674	0.20	20.00	9.695	105	80	120				
Manganese	191.208	1.0	200.0	0	95.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 29, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012951

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 15, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012951

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protom, Missouri.

Analytical Comments for EPA 218.6_Low Level:

Matrix Spike (MS) on QC sample N012951-014AMS is outside recovery criteria however, it passed in the regular level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Dilution was necessary on N012951-008 due to precipitation of sample upon the addition of eluent.



ASSET Laboratories

Date: 29-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012951
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012951-001A	MW-754-059b-Q3	Water	7/15/2014 2:10:00 PM	7/15/2014	7/29/2014
N012951-002A	MW-46-059b-Q3	Water	7/15/2014 11:51:00 AM	7/15/2014	7/29/2014
N012951-002B	MW-46-059b-Q3	Water	7/15/2014 11:51:00 AM	7/15/2014	7/29/2014
N012951-003A	MW-179D-059b-Q3	Water	7/15/2014 11:06:00 AM	7/15/2014	7/29/2014
N012951-003B	MW-179D-059b-Q3	Water	7/15/2014 11:06:00 AM	7/15/2014	7/29/2014
N012951-004A	MW-179S-059b-Q3	Water	7/15/2014 10:21:00 AM	7/15/2014	7/29/2014
N012951-004B	MW-179S-059b-Q3	Water	7/15/2014 10:21:00 AM	7/15/2014	7/29/2014
N012951-005A	SA-MW-26D-059b-Q3	Water	7/15/2014 8:45:00 AM	7/15/2014	7/29/2014
N012951-005B	SA-MW-26D-059b-Q3	Water	7/15/2014 8:45:00 AM	7/15/2014	7/29/2014
N012951-005C	SA-MW-26D-059b-Q3	Water	7/15/2014 8:45:00 AM	7/15/2014	7/29/2014
N012951-005D	SA-MW-26D-059b-Q3	Water	7/15/2014 8:45:00 AM	7/15/2014	7/29/2014
N012951-006A	SA-MW-26S-059b-Q3	Water	7/15/2014 9:33:00 AM	7/15/2014	7/29/2014
N012951-006B	SA-MW-26S-059b-Q3	Water	7/15/2014 9:33:00 AM	7/15/2014	7/29/2014
N012951-006C	SA-MW-26S-059b-Q3	Water	7/15/2014 9:33:00 AM	7/15/2014	7/29/2014
N012951-006D	SA-MW-26S-059b-Q3	Water	7/15/2014 9:33:00 AM	7/15/2014	7/29/2014
N012951-007A	MW-755-059b-Q3	Water	7/15/2014 1:40:00 PM	7/15/2014	7/29/2014
N012951-008A	X-10-059b-Q3	Water	7/15/2014 11:16:00 AM	7/15/2014	7/29/2014
N012951-008B	X-10-059b-Q3	Water	7/15/2014 11:16:00 AM	7/15/2014	7/29/2014
N012951-008C	X-10-059b-Q3	Water	7/15/2014 11:16:00 AM	7/15/2014	7/29/2014
N012951-009A	X-11-059b-Q3	Water	7/15/2014 8:33:00 AM	7/15/2014	7/29/2014
N012951-009B	X-11-059b-Q3	Water	7/15/2014 8:33:00 AM	7/15/2014	7/29/2014
N012951-010A	MW-935-059b-Q3	Water	7/15/2014 9:30:00 AM	7/15/2014	7/29/2014
N012951-010B	MW-935-059b-Q3	Water	7/15/2014 9:30:00 AM	7/15/2014	7/29/2014
N012951-011A	X-12-059b-Q3	Water	7/15/2014 9:20:00 AM	7/15/2014	7/29/2014
N012951-011B	X-12-059b-Q3	Water	7/15/2014 9:20:00 AM	7/15/2014	7/29/2014
N012951-012A	X-13-059b-Q3	Water	7/15/2014 10:11:00 AM	7/15/2014	7/29/2014
N012951-012B	X-13-059b-Q3	Water	7/15/2014 10:11:00 AM	7/15/2014	7/29/2014
N012951-013A	X-16-059b-Q3	Water	7/15/2014 12:20:00 PM	7/15/2014	7/29/2014
N012951-013B	X-16-059b-Q3	Water	7/15/2014 12:20:00 PM	7/15/2014	7/29/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012951
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012951-014A	MW-756-059b-Q3	Water	7/15/2014 7:50:00 AM	7/15/2014	7/29/2014
N012951-015A	MW-178D-059b-Q3	Water	7/15/2014 1:34:00 PM	7/15/2014	7/29/2014
N012951-015B	MW-178D-059b-Q3	Water	7/15/2014 1:34:00 PM	7/15/2014	7/29/2014
N012951-015C	MW-178D-059b-Q3	Water	7/15/2014 1:34:00 PM	7/15/2014	7/29/2014
N012951-016A	MW-178S-059b-Q3	Water	7/15/2014 2:38:00 PM	7/15/2014	7/29/2014
N012951-016B	MW-178S-059b-Q3	Water	7/15/2014 2:38:00 PM	7/15/2014	7/29/2014
N012951-016C	MW-178S-059b-Q3	Water	7/15/2014 2:38:00 PM	7/15/2014	7/29/2014
N012951-017A	MW-181D-059b-Q3	Water	7/15/2014 8:55:00 AM	7/15/2014	7/29/2014
N012951-017B	MW-181D-059b-Q3	Water	7/15/2014 8:55:00 AM	7/15/2014	7/29/2014
N012951-017C	MW-181D-059b-Q3	Water	7/15/2014 8:55:00 AM	7/15/2014	7/29/2014
N012951-018A	MW-181S-059b-Q3	Water	7/15/2014 8:24:00 AM	7/15/2014	7/29/2014
N012951-018B	MW-181S-059b-Q3	Water	7/15/2014 8:24:00 AM	7/15/2014	7/29/2014
N012951-018C	MW-181S-059b-Q3	Water	7/15/2014 8:24:00 AM	7/15/2014	7/29/2014
N012951-019A	MW-182D-059b-Q3	Water	7/15/2014 9:36:00 AM	7/15/2014	7/29/2014
N012951-019B	MW-182D-059b-Q3	Water	7/15/2014 9:36:00 AM	7/15/2014	7/29/2014
N012951-020A	MW-182S-059b-Q3	Water	7/15/2014 10:08:00 AM	7/15/2014	7/29/2014
N012951-020B	MW-182S-059b-Q3	Water	7/15/2014 10:08:00 AM	7/15/2014	7/29/2014
N012951-021A	MW-183D-059b-Q3	Water	7/15/2014 10:42:00 AM	7/15/2014	7/29/2014
N012951-021B	MW-183D-059b-Q3	Water	7/15/2014 10:42:00 AM	7/15/2014	7/29/2014
N012951-022A	MW-927-059b-Q3	Water	7/15/2014 10:52:00 AM	7/15/2014	7/29/2014
N012951-022B	MW-927-059b-Q3	Water	7/15/2014 10:52:00 AM	7/15/2014	7/29/2014
N012951-023A	MW-183S-059b-Q3	Water	7/15/2014 11:18:00 AM	7/15/2014	7/29/2014
N012951-023B	MW-183S-059b-Q3	Water	7/15/2014 11:18:00 AM	7/15/2014	7/29/2014



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-001

Client Sample ID: MW-754-059b-Q3
Collection Date: 7/15/2014 2:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222						Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 02:52 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174						Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/16/2014 04:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-002

Client Sample ID: MW-46-059b-Q3
Collection Date: 7/15/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	0.56	0.016	0.20		µg/L	1	7/16/2014 04:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 07:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-179D-059b-Q3
Lab Order:	N012951	Collection Date:	7/15/2014 11:06:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N012951-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	26	0.032	0.40		µg/L	2	7/16/2014 06:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-004

Client Sample ID: MW-179S-059b-Q3
Collection Date: 7/15/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate		Analyst: RB
Hexavalent Chromium	0.57	0.016	0.20	µg/L	1	7/16/2014 05:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-26D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 8:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	0.94	0.016	0.20		µg/L	1	7/16/2014 06:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/18/2014 08:33 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-006

Client Sample ID: SA-MW-26S-059b-Q3
Collection Date: 7/15/2014 9:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	360	0.80	10		µg/L	50	7/16/2014 07:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078				PrepDate	7/17/2014	Analyst: CEI
Chromium	380	0.15	5.0		µg/L	5	7/18/2014 03:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-007

Client Sample ID: MW-755-059b-Q3
Collection Date: 7/15/2014 1:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222						Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 03:13 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174						Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/16/2014 06:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** X-10-059b-Q3
Lab Order: N012951 **Collection Date:** 7/15/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012951-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC6_140716A** QC Batch: **R94174** PrepDate Analyst: **RB**
Hexavalent Chromium 42 0.080 1.0 µg/L 5 7/16/2014 07:14 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-009

Client Sample ID: X-11-059b-Q3
Collection Date: 7/15/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	0.44	0.016	0.20		µg/L	1	7/16/2014 07:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-010

Client Sample ID: MW-935-059b-Q3
Collection Date: 7/15/2014 9:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate		Analyst: RB
Hexavalent Chromium	470	0.80	10	µg/L	50	7/16/2014 11:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-011

Client Sample ID: X-12-059b-Q3
Collection Date: 7/15/2014 9:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate		Analyst: RB
Hexavalent Chromium	480	0.80	10	µg/L	50	7/16/2014 09:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-13-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 10:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	690	1.6	20		µg/L	100	7/16/2014 10:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-16-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	15	0.016	0.20		µg/L	1	7/16/2014 08:16 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-014

Client Sample ID: MW-756-059b-Q3
Collection Date: 7/15/2014 7:50:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 03:34 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/16/2014 08:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-015

Client Sample ID: MW-178D-059b-Q3
Collection Date: 7/15/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	290	0.32	4.0		µg/L	20	7/16/2014 10:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-016

Client Sample ID: MW-178S-059b-Q3
Collection Date: 7/15/2014 2:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	220	0.32	4.0		µg/L	20	7/16/2014 10:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-017

Client Sample ID: MW-181D-059b-Q3
Collection Date: 7/15/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20	µg/L	1	7/16/2014 08:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-018

Client Sample ID: MW-181S-059b-Q3
Collection Date: 7/15/2014 8:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174			PrepDate			Analyst: RB
Hexavalent Chromium	0.77	0.016	0.20		µg/L	1	7/16/2014 09:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-019

Client Sample ID: MW-182D-059b-Q3
Collection Date: 7/15/2014 9:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	39	0.080	1.0		µg/L	5	7/16/2014 10:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-020

Client Sample ID: MW-182S-059b-Q3
Collection Date: 7/15/2014 10:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140716A	QC Batch: R94174				PrepDate		Analyst: RB
Hexavalent Chromium	30	0.032	0.40		µg/L	2	7/16/2014 10:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-183D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 10:42:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178			PrepDate			Analyst: RB
Hexavalent Chromium	22	0.080	1.0	µg/L	5		7/17/2014 12:42 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-022

Client Sample ID: MW-927-059b-Q3
Collection Date: 7/15/2014 10:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178			PrepDate		Analyst: RB
Hexavalent Chromium	21	0.16	2.0	µg/L	10	7/17/2014 12:52 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-183S-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 11:18:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178			PrepDate			Analyst: RB
Hexavalent Chromium	33	0.080	1.0	µg/L	5		7/17/2014 01:01 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94222	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: PBW	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810121						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94222	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: LCSW	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810122						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.193 0.060 0.2000 0 96.4 90 110

Sample ID N012957-015ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810124						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.654 0.060 0.6582 0.707 20

Sample ID N012968-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810126						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID N012968-016AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810127						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.199 0.060 0.2000 0 99.3 90 110 0.2036 2.46 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012951-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01335	106	90	110				

Sample ID N012951-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810139						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N012951-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810141						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0	111	90	110				S

Sample ID N012952-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810146						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01607	103	90	110				

Sample ID N012952-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810148						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.03429	109	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.251	0.060	0.2000	0.04380	103	90	110				

Sample ID N012952-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810152						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				

Sample ID N012952-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810156						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01306	101	90	110				

Sample ID N012952-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110				

Sample ID N012952-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810160						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.05231	95.8	90	110				

Sample ID N012952-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810164						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0	104	90	110				

Sample ID N012954-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810168						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.279	0.060	0.2000	0.08308	97.8	90	110				

Sample ID N012963-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810170						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110				

Sample ID N012963-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810172						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94174	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: PBW	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807229						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94174	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: LCSW	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807230						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.061	0.20	5.000	0	101	90	110				
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Sample ID N012951-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807232						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N012951-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807233						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.054	0.20	1.000	0	105	90	110				
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Sample ID N012951-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807234						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.044	0.20	1.000	0	104	90	110	1.054	0.915	20	
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012951-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807236						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.557	0.20	1.000	0.5626	99.4	90	110				

Sample ID N012951-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807240						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.589	0.20	1.000	0.5739	101	90	110				

Sample ID N012951-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807242						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.970	0.20	1.000	0.9406	103	90	110				

Sample ID N012951-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807244						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.058	0.20	1.000	0	106	90	110				

Sample ID N012951-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.098	0.20	1.000	0	110	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012951-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807255							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.270	0.20	1.000	1.243	103	90	110				

Sample ID N012951-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807257							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.805	0.20	1.000	0.7718	103	90	110				

Sample ID N012951-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94174						
Client ID: ZZZZZZ	Batch ID: R94174	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807266							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.511	0.20	1.000	0.4380	107	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94178	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: PBW	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94178	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: LCSW	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.883	0.20	5.000	0	97.7	90	110				
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Sample ID N012954-003A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.761	0.20						0.7438	2.34	20	
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Sample ID N012954-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.781	0.20	1.000	0.7438	104	90	110				
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Sample ID N012954-003A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.743	0.20	1.000	0.7438	99.9	90	110	1.781	2.16	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012954-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807488						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.961	0.20	1.000	0.9355	103	90	110				

Sample ID N012954-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807490						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.476	0.20	1.000	1.454	102	90	110				

Sample ID N012954-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807494						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.353	0.20	1.000	1.356	99.7	90	110				

Sample ID N012954-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807496						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.091	0.20	1.000	3.100	99.1	90	110				

Sample ID N012954-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.253	0.20	1.000	1.202	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012954-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.775	0.20	1.000	0.7451	103	90	110				

Sample ID N012954-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807502						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.499	0.20	1.000	0.4684	103	90	110				

Sample ID N012954-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807506						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.196	0.20	1.000	1.154	104	90	110				

Sample ID N012954-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0.07760	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46078	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: PBW	Batch ID: 46078	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809114						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46078	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: LCSW	Batch ID: 46078	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809115						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.295 1.0 10.00 0 103 85 115

Sample ID N012951-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: ZZZZZZ	Batch ID: 46078	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809119						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.701 1.0 10.00 0.8218 98.8 75 125

Sample ID N012951-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: ZZZZZZ	Batch ID: 46078	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809120						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.754 1.0 10.00 0.8218 99.3 75 125 10.70 0.491 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-005

Client Sample ID: SA-MW-26D-059b-Q3
Collection Date: 7/15/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	0.12	0.027	0.10		mg/L	1	7/16/2014 10:50 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Sulfate	48	0.33	5.0		mg/L	10	7/16/2014 04:13 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Nitrate as N	0.60	0.0051	0.050		mg/L	1	7/16/2014 10:50 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-006

Client Sample ID: SA-MW-26S-059b-Q3
Collection Date: 7/15/2014 9:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/16/2014 11:03 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/16/2014 04:26 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163				PrepDate		Analyst: PS
Nitrate as N	4.3	0.026	0.25		mg/L	5	7/16/2014 12:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-10-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163	PrepDate	Analyst: PS
Orthophosphate, Dissolved (as P)	ND 0.054 0.20	mg/L	2 7/16/2014 11:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
Client ID	Batch ID	TestNo		Analysis Date	SeqNo						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MB-R94163_PO4	MBLK	300_W_PO4P	mg/L		94163						
PBW	R94163	EPA 300.0		7/16/2014	1806519						
Orthophosphate, Dissolved (as P)	ND	0.10									
LCS-R94163_PO4	LCS	300_W_PO4P	mg/L		94163						
LCSW	R94163	EPA 300.0		7/16/2014	1806520						
Orthophosphate, Dissolved (as P)	2.549	0.10	2.500	0	102	90	110				
N012951-006C-DUP	DUP	300_W_PO4P	mg/L		94163						
ZZZZZ	R94163	EPA 300.0		7/16/2014	1806526						
Orthophosphate, Dissolved (as P)	ND	0.10						0	0	20	
N012951-006C-MS	MS	300_W_PO4P	mg/L		94163						
ZZZZZ	R94163	EPA 300.0		7/16/2014	1806527						
Orthophosphate, Dissolved (as P)	2.155	0.10	2.500	0	86.2	80	120				
N012951-006C-MSD	MSD	300_W_PO4P	mg/L		94163						
ZZZZZ	R94163	EPA 300.0		7/16/2014	1806528						
Orthophosphate, Dissolved (as P)	2.455	0.10	2.500	0	98.2	80	120	2.155	13.0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94163_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: PBW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806537						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94163_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: LCSW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806538						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 5.039 0.50 5.000 0 101 90 110

Sample ID N012929-029C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 141.880 10 142.6 0.506 20

Sample ID N012929-029C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806545						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 242.880 10 100.0 142.6 100 80 120

Sample ID N012929-029C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806550						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 243.580 10 100.0 142.6 101 80 120 242.9 0.288 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: MB-R94163_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: PBW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID: LCS-R94163_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: LCSW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.057 0.050 1.000 0 106 90 110

Sample ID: N012953-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 6.550 0.50 6.650 1.52 20

Sample ID: N012953-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806509						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 16.850 0.50 10.00 6.650 102 80 120

Sample ID: N012953-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163						
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806510						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 16.850 0.50 10.00 6.650 102 80 120 16.85 0 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-002

Client Sample ID: MW-46-059b-Q3
Collection Date: 7/15/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076			PrepDate	7/17/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/17/2014 12:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-26D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 8:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/17/2014 12:16 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-26S-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 9:33:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/17/2014 12:21 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-10-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/17/2014 12:25 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-009

Client Sample ID: X-11-059b-Q3
Collection Date: 7/15/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076			PrepDate	7/17/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/17/2014 12:30 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-935-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 9:30:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L
			1
			7/17/2014 12:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-011

Client Sample ID: X-12-059b-Q3
Collection Date: 7/15/2014 9:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076			PrepDate	7/17/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/17/2014 12:41 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-13-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 10:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/17/2014 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: X-16-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140717A	QC Batch: 46076	PrepDate: 7/17/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1 7/17/2014 01:00 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46076	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: PBW	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806619
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46076	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: LCSW	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806620
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.092 0.020 0.1000 0 92.1 85 115

Sample ID N012946-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: ZZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806624
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.103 0.020 0.1000 0.003199 99.6 75 125

Sample ID N012946-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94166
Client ID: ZZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/17/2014	SeqNo: 1806625
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.108 0.020 0.1000 0.003199 105 75 125 0.1028 4.89 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-002

Client Sample ID: MW-46-059b-Q3
Collection Date: 7/15/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078				PrepDate	7/17/2014	Analyst: CEI
Arsenic	2.7	0.027	0.10		µg/L	1	7/18/2014 07:54 AM
Manganese	ND	0.026	0.50		µg/L	1	7/18/2014 07:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-179D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 11:06:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078	PrepDate: 7/17/2014	Analyst: CEI
Manganese	ND 0.026	0.50	µg/L 1
			7/18/2014 08:22 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-179S-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078	PrepDate: 7/17/2014	Analyst: CEI
Manganese	ND 0.026	0.50	µg/L 1
			7/18/2014 08:27 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-26D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 8:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	1.9	0.027	0.10		µg/L	1 7/18/2014 08:33 AM
Manganese	1.9	0.026	0.50		µg/L	1 7/18/2014 08:33 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-006

Client Sample ID: SA-MW-26S-059b-Q3
Collection Date: 7/15/2014 9:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	1.0	0.027	0.10	µg/L	1	7/18/2014 08:49 AM
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 08:49 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-008

Client Sample ID: X-10-059b-Q3
Collection Date: 7/15/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	0.60	0.027	0.10	µg/L	1	7/18/2014 08:55 AM
Manganese	11	0.026	0.50	µg/L	1	7/18/2014 08:55 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-009

Client Sample ID: X-11-059b-Q3
Collection Date: 7/15/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	0.65	0.027	0.10	µg/L	1	7/18/2014 09:00 AM
Manganese	1700	0.64	12	µg/L	25	7/18/2014 03:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-010

Client Sample ID: MW-935-059b-Q3
Collection Date: 7/15/2014 9:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	0.64	0.027	0.10	µg/L	1	7/18/2014 09:06 AM
Manganese	2.7	0.026	0.50	µg/L	1	7/18/2014 09:06 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-011

Client Sample ID: X-12-059b-Q3
Collection Date: 7/15/2014 9:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	0.64	0.027	0.10	µg/L	1	7/18/2014 09:11 AM
Manganese	2.8	0.026	0.50	µg/L	1	7/18/2014 09:11 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-012

Client Sample ID: X-13-059b-Q3
Collection Date: 7/15/2014 10:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Arsenic	0.97	0.027	0.10		µg/L	1	7/18/2014 09:22 AM
Manganese	ND	0.026	0.50		µg/L	1	7/18/2014 09:22 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-013

Client Sample ID: X-16-059b-Q3
Collection Date: 7/15/2014 12:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI
Arsenic	0.39	0.027	0.10	µg/L	1	7/18/2014 09:28 AM
Manganese	120	0.026	0.50	µg/L	1	7/18/2014 09:28 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-015

Client Sample ID: MW-178D-059b-Q3
Collection Date: 7/15/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 09:33 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-016

Client Sample ID: MW-178S-059b-Q3
Collection Date: 7/15/2014 2:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 09:39 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-181D-059b-Q3
Lab Order: N012951	Collection Date: 7/15/2014 8:55:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012951-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078	PrepDate: 7/17/2014	Analyst: CEI
Manganese	ND 0.026	0.50	µg/L 1
			7/18/2014 09:44 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-018

Client Sample ID: MW-181S-059b-Q3
Collection Date: 7/15/2014 8:24:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:01 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-019

Client Sample ID: MW-182D-059b-Q3
Collection Date: 7/15/2014 9:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:06 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-020

Client Sample ID: MW-182S-059b-Q3
Collection Date: 7/15/2014 10:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:12 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-021

Client Sample ID: MW-183D-059b-Q3
Collection Date: 7/15/2014 10:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:17 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-022

Client Sample ID: MW-927-059b-Q3
Collection Date: 7/15/2014 10:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:23 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012951-023

Client Sample ID: MW-183S-059b-Q3
Collection Date: 7/15/2014 11:18:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46078			PrepDate	7/17/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/18/2014 10:28 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46078	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210
Client ID: PBW	Batch ID: 46078	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809253
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46078	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210
Client ID: LCSW	Batch ID: 46078	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809254
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.649	0.10	10.00	0	106 85 115
Manganese	99.741	0.50	100.0	0	99.7 85 115

Sample ID N012951-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210
Client ID: ZZZZZ	Batch ID: 46078	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809258
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	13.325	0.10	10.00	2.710	106 75 125
Manganese	89.988	0.50	100.0	0	90.0 75 125

Sample ID N012951-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210
Client ID: ZZZZZ	Batch ID: 46078	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809259
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	13.416	0.10	10.00	2.710	107 75 125 13.33 0.680 20
Manganese	91.052	0.50	100.0	0	91.1 75 125 89.99 1.18 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name	Location	Project Number	Project Manager	Sample Manager	Cell Number	Fax Number	Task Order	Project	Turnaround Time	Shipping Date:	COC Number:	Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	50ml Centrifug	Number of Containers	COMMENTS
												Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C (blue ice)		
												Filtered:	Field	Field	Field	Field	Field	Field	Field	Field		
												Holding Time (days):	28	180	180	180	180	2	2	7		
													Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AEFF) FF As, Cr, Mn	Metals Dissolved (6020AEFF) FF Mn	Metals Dissolved (6020AEFF) FF Mn	Anions (E300.0) FF NO3N, SO4	Ortho-Phosphate (E300.0) FF	Eosine, Fluorescein FF		
SAMPLE ID	DATE	TIME	Matrix	X																		
MW-754-059b-Q3	7/15/2014	1410	Water	X																	1	JM
MW-46-059b-Q3	7/15/2014	1151	Water	X	X	X															2	JM
MW-179D-059b-Q3	7/15/2014	1106	Water	X					X												2	JM
MW-179S-059b-Q3	7/15/2014	1021	Water	X					X												2	JM
SA-MW-26D-059b-Q3	7/15/2014	0845	Water	X	X	X			X	X	X										4	JM
SA-MW-26S-059b-Q3	7/15/2014	0933	Water	X	X	X			X	X	X										4	JM
MW-755-059b-Q3	7/15/2014	1340	Water	X																	1	JD
X-10-059b-Q3	7/15/2014	1116	Water	X	X			X													3	JD
X-11-059b-Q3	7/15/2014	0833	Water	X	X			X													2	JD
MW-935-059b-Q3	7/15/2014	0930	Water	X	X			X													2	JD
X-12-059b-Q3	7/15/2014	0920	Water	X	X			X													2	JD
X-13-059b-Q3	7/15/2014	1011	Water	X	X			X													2	JD
X-16-059b-Q3	7/15/2014	1220	Water	X	X			X													2	JD
MW-756-059b-Q3	7/15/2014	0750	Water	X																	1	SD
MW-178D-059b-Q3	7/15/2014	1334	Water	X					X												3	SD
MW-178S-059b-Q3	7/15/2014	1438	Water	X					X												3	SD

NO12951-1

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Signatures Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7/15/14 1530 7/15/14 7/15/14 1530 7/15/14 1530 7/15/14 / JPB 7/15/14 / JPB	Shipping Details Method of Shipment: On Ice: <i>yes</i> / no <i>S-2</i> Airbill No: <i>12#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: Preservatives: Filtered: Holding Time (days):	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 50ml Centrifug 4°C (blue ice) Field Field Field Field Field Field Field Field	28 180 180 180 180 2 2 7	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Fe Metals Dissolved (6020AFF) FF As, Cr, Mn Metals Dissolved (6020AFF) FF As, Mn Metals Dissolved (6020AFF) FF Mn Anions (E300.0) FF NO3N, SO4 Ortho-Phosphate (E300.0) FF Eosine, Fluorescein FF	Number of Containers COMMENTS				
SAMPLE ID	DATE	TIME	Matrix									
MW-181D-059b-Q3	7/15/2014	0855	Water	X				X				
MW-181S-059b-Q3	7/15/2014	0824	Water	X				X				
MW-182D-059b-Q3	7/15/2014	0936	Water	X				X				
MW-182S-059b-Q3	7/15/2014	1008	Water	X				X				
MW-183D-059b-Q3	7/15/2014	1042	Water	X				X				
MW-927-059b-Q3	7/15/2014	1052	Water	X				X				
MW-183S-059b-Q3	7/15/2014	1118	Water	X				X				
TOTAL NUMBER OF CONTAINERS										52		

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/15/14 1550 7/15/14 7/15/14 1550 7/15/14 1550 7/15/14 1550 7/15/14 1550	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> / no <i>S. 7X</i> Airbill No: <i>162#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/15/2014 Workorder: N012951
 Rep sample Temp (Deg C): 3.2, 3.7 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: N/A Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B For: GG  7/16/2014

Reviewed By:  07/17/14



ASSET Laboratories

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www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protem, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

Field Sampler: Lee Bures

16-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCIEIN
N012951-005D / SA-MW-26D-059b-Q3	Water	7/15/2014 8:45:00 AM	2OZP	1	1
N012951-006D / SA-MW-26S-059b-Q3	Water	7/15/2014 9:33:00 AM	2OZP	1	1
N012951-015C / MW-178D-059b-Q3	Water	7/15/2014 1:34:00 PM	2OZP	1	1
N012951-016C / MW-178S-059b-Q3	Water	7/15/2014 2:38:00 PM	2OZP	1	1
N012951-017C / MW-181D-059b-Q3	Water	7/15/2014 8:55:00 AM	2OZP	1	1
N012951-018C / MW-181S-059b-Q3	Water	7/15/2014 8:24:00 AM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012951 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 1711 9796

Relinquished by: <u>ACortez</u> 7/16/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012951-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.013349 * 1 \\ &= 0.013349\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012951-012A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 6.9231 * 100 \\ &= 692.31\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 690$$

 7/29/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012951-006C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.861 * 5 \\ &= 4.305 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 4.3$$

 7/29/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012951-002B**, the concentration in mg/L is calculated as follows:


$$\begin{aligned} \text{Iron, mg/L} &= 0.01423591129 * 1 * (25/25) \\ &= 0.01423591129 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.014$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

 7/29/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012951
Test Method: EPA 6010
Analysis Date: 7/17/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46076

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012946-002B-DT 5X	Iron	mg/L	0.012933152	NA	0.003199082	304.28%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012946-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94166						
Client ID: ZZZZZ	Batch ID: 46076	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806623							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	4.561	0.040	5.000	0.003199	91.2	80	120				
------	-------	-------	-------	----------	------	----	-----	--	--	--	--

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012951-005B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.061209046 * 1 * (25/25) \\ &= 1.061209046 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.1$$

 7/29/2014

CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012951-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94210						
Client ID: ZZZZZ	Batch ID: 46078	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809118							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.927	2.0	20.00	0.8218	101	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012951
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012951-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94210						
Client ID: ZZZZZ	Batch ID: 46078	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809257						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.935	0.20	20.00	2.710	106	80	120				
Manganese	190.206	1.0	200.0	0	95.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 29, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012952

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 15, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012952

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 29-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012952
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012952-001A	MW-838-059-Q3	Water	7/15/2014 1:30:00 PM	7/15/2014	7/29/2014
N012952-002A	MW-142S1-059-Q3	Water	7/15/2014 3:20:00 PM	7/15/2014	7/29/2014
N012952-002B	MW-142S1-059-Q3	Water	7/15/2014 3:20:00 PM	7/15/2014	7/29/2014
N012952-003A	MW-142S2-059-Q3	Water	7/15/2014 1:26:00 PM	7/15/2014	7/29/2014
N012952-003B	MW-142S2-059-Q3	Water	7/15/2014 1:26:00 PM	7/15/2014	7/29/2014
N012952-004A	MW-142S3-059-Q3	Water	7/15/2014 12:50:00 PM	7/15/2014	7/29/2014
N012952-004B	MW-142S3-059-Q3	Water	7/15/2014 12:50:00 PM	7/15/2014	7/29/2014
N012952-005A	MW-166S1-059-Q3	Water	7/15/2014 12:02:00 PM	7/15/2014	7/29/2014
N012952-005B	MW-166S1-059-Q3	Water	7/15/2014 12:02:00 PM	7/15/2014	7/29/2014
N012952-006A	MW-166S2-059-Q3	Water	7/15/2014 11:25:00 AM	7/15/2014	7/29/2014
N012952-006B	MW-166S2-059-Q3	Water	7/15/2014 11:25:00 AM	7/15/2014	7/29/2014
N012952-007A	MW-167D-059-Q3	Water	7/15/2014 8:50:00 AM	7/15/2014	7/29/2014
N012952-007B	MW-167D-059-Q3	Water	7/15/2014 8:50:00 AM	7/15/2014	7/29/2014
N012952-008A	MW-989-059-Q3	Water	7/15/2014 8:55:00 AM	7/15/2014	7/29/2014
N012952-008B	MW-989-059-Q3	Water	7/15/2014 8:55:00 AM	7/15/2014	7/29/2014
N012952-009A	MW-167S1-059-Q3	Water	7/15/2014 10:06:00 AM	7/15/2014	7/29/2014
N012952-009B	MW-167S1-059-Q3	Water	7/15/2014 10:06:00 AM	7/15/2014	7/29/2014
N012952-010A	MW-167S2-059-Q3	Water	7/15/2014 9:28:00 AM	7/15/2014	7/29/2014
N012952-010B	MW-167S2-059-Q3	Water	7/15/2014 9:28:00 AM	7/15/2014	7/29/2014
N012952-011A	SC-MW-16C-059-Q3	Water	7/15/2014 1:53:00 PM	7/15/2014	7/29/2014
N012952-011B	SC-MW-16C-059-Q3	Water	7/15/2014 1:53:00 PM	7/15/2014	7/29/2014
N012952-012A	MW-839-059-Q3	Water	7/15/2014 8:45:00 AM	7/15/2014	7/29/2014
N012952-013A	MW-123S1-059-Q3	Water	7/15/2014 8:33:00 AM	7/15/2014	7/29/2014
N012952-013B	MW-123S1-059-Q3	Water	7/15/2014 8:33:00 AM	7/15/2014	7/29/2014
N012952-014A	MW-123S2-059-Q3	Water	7/15/2014 9:25:00 AM	7/15/2014	7/29/2014
N012952-014B	MW-123S2-059-Q3	Water	7/15/2014 9:25:00 AM	7/15/2014	7/29/2014
N012952-015A	MW-124D-059-Q3	Water	7/15/2014 12:26:00 PM	7/15/2014	7/29/2014
N012952-015B	MW-124D-059-Q3	Water	7/15/2014 12:26:00 PM	7/15/2014	7/29/2014
N012952-016A	MW-124S1-059-Q3	Water	7/15/2014 10:15:00 AM	7/15/2014	7/29/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012952
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012952-016B	MW-124S1-059-Q3	Water	7/15/2014 10:15:00 AM	7/15/2014	7/29/2014
N012952-017A	MW-124S2-059-Q3	Water	7/15/2014 11:05:00 AM	7/15/2014	7/29/2014
N012952-017B	MW-124S2-059-Q3	Water	7/15/2014 11:05:00 AM	7/15/2014	7/29/2014



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-001

Client Sample ID: MW-838-059-Q3
Collection Date: 7/15/2014 1:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222						Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 04:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201						Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 10:48 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-002

Client Sample ID: MW-142S1-059-Q3
Collection Date: 7/15/2014 3:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	5.7	0.016	0.20		µg/L	1	7/17/2014 11:28 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	5.7	0.030	1.0		µg/L	1	7/18/2014 10:45 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-003

Client Sample ID: MW-142S2-059-Q3
Collection Date: 7/15/2014 1:26:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/17/2014 11:48 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	7/18/2014 11:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-004

Client Sample ID: MW-142S3-059-Q3
Collection Date: 7/15/2014 12:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/17/2014 12:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/18/2014 11:29 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-005

Client Sample ID: MW-166S1-059-Q3
Collection Date: 7/15/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 04:47 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 12:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 11:34 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-006

Client Sample ID: MW-166S2-059-Q3
Collection Date: 7/15/2014 11:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 05:08 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 01:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 11:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-167D-059-Q3
Lab Order: N012952	Collection Date: 7/15/2014 8:50:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012952-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 05:28 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 01:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 11:45 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-008

Client Sample ID: MW-989-059-Q3
Collection Date: 7/15/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 06:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 01:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 11:51 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-009

Client Sample ID: MW-167S1-059-Q3
Collection Date: 7/15/2014 10:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 06:31 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 02:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 11:56 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-010

Client Sample ID: MW-167S2-059-Q3
Collection Date: 7/15/2014 9:28:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 06:52 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 02:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 12:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-16C-059-Q3
Lab Order: N012952	Collection Date: 7/15/2014 1:53:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012952-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC (LOW LEVEL)							
EPA 218.6							
RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 07:12 PM
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 03:10 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A				EPA 6020			
RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 12:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-012

Client Sample ID: MW-839-059-Q3
Collection Date: 7/15/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/19/2014 07:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 03:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-013

Client Sample ID: MW-123S1-059-Q3
Collection Date: 7/15/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/17/2014 03:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/18/2014 12:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-014

Client Sample ID: MW-123S2-059-Q3
Collection Date: 7/15/2014 9:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/17/2014 04:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/18/2014 12:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-015

Client Sample ID: MW-124D-059-Q3
Collection Date: 7/15/2014 12:26:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	0.46	0.016	0.20		µg/L	1	7/17/2014 04:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/18/2014 12:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-016

Client Sample ID: MW-124S1-059-Q3
Collection Date: 7/15/2014 10:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	2.5	0.016	0.20		µg/L	1	7/17/2014 05:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/18/2014 12:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL
Lab Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012952-017

Client Sample ID: MW-124S2-059-Q3
Collection Date: 7/15/2014 11:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/17/2014 05:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718A	QC Batch: 46079				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	7/18/2014 12:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012952
 Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID	MB-R94222	SampType:	MBLK	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94222			
Client ID:	PBW	Batch ID:	R94222	TestNo:	EPA 218.6			Analysis Date:	7/19/2014	SeqNo:	1810121			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID	LCS-R94222	SampType:	LCS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94222			
Client ID:	LCSW	Batch ID:	R94222	TestNo:	EPA 218.6			Analysis Date:	7/19/2014	SeqNo:	1810122			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.193 0.060 0.2000 0 96.4 90 110

Sample ID	N012957-015ADUP	SampType:	DUP	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94222			
Client ID:	ZZZZZ	Batch ID:	R94222	TestNo:	EPA 218.6			Analysis Date:	7/19/2014	SeqNo:	1810124			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.654 0.060 0.6582 0.707 20

Sample ID	N012968-016AMS	SampType:	MS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94222			
Client ID:	ZZZZZ	Batch ID:	R94222	TestNo:	EPA 218.6			Analysis Date:	7/19/2014	SeqNo:	1810126			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID	N012968-016AMSD	SampType:	MSD	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94222			
Client ID:	ZZZZZ	Batch ID:	R94222	TestNo:	EPA 218.6			Analysis Date:	7/19/2014	SeqNo:	1810127			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.199 0.060 0.2000 0 99.3 90 110 0.2036 2.46 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012951-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01335	106	90	110				

Sample ID N012951-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810139						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N012951-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810141						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0	111	90	110				S

Sample ID N012952-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810146						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01607	103	90	110				

Sample ID N012952-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810148						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.03429	109	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.251	0.060	0.2000	0.04380	103	90	110				

Sample ID N012952-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810152						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				

Sample ID N012952-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810156						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01306	101	90	110				

Sample ID N012952-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110				

Sample ID N012952-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810160						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.244	0.060	0.2000	0.05231	95.8	90	110
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Sample ID N012952-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810164						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.208	0.060	0.2000	0	104	90	110
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Sample ID N012954-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810168						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.279	0.060	0.2000	0.08308	97.8	90	110
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Sample ID N012963-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810170						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110
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Sample ID N012963-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810172						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94201	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: PBW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808249						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94201	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: LCSW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808250						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.032	0.20	5.000	0	101	90	110				
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Sample ID N012952-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.038	0.20						0	0	20	
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Sample ID N012952-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.089	0.20	1.000	0	109	90	110				
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Sample ID N012952-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808254						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.089	0.20	1.000	0	109	90	110	1.089	0	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.724	0.20	5.000	5.736	99.7	90	110				

Sample ID N012952-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808258						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.831	0.20	5.000	2.782	101	90	110				

Sample ID N012952-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808262						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.864	0.20	5.000	2.825	101	90	110				

Sample ID N012952-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808264						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.116	0.20	1.000	0.06470	105	90	110				

Sample ID N012952-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808266						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.075	0.20	1.000	0	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0.06200	99.7	90	110				

Sample ID N012952-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0.05260	103	90	110				

Sample ID N012952-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808274						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.040	0.20	1.000	0.04010	100	90	110				

Sample ID N012952-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.098	0.20	1.000	0	110	90	110				

Sample ID N012952-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808278						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.067	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.071	0.20	1.000	0	107	90	110				

Sample ID N012952-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.022	0.20	5.000	1.935	102	90	110				

Sample ID N012952-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.861	0.20	1.000	1.864	99.7	90	110				

Sample ID N012952-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808288						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.514	0.20	1.000	0.4568	106	90	110				

Sample ID N012952-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808290						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.461	0.20	1.000	2.471	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.299	0.20	1.000	2.272	103	90	110				

Sample ID N012943-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808294						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.608	0.20	1.000	1.600	101	90	110				

Sample ID N012966-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808298						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.911	0.20	5.000	6.990	98.4	90	110				

Sample ID N012966-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808300						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.191	0.20	5.000	8.127	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46079	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: PBW	Batch ID: 46079	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809144						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46079	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: LCSW	Batch ID: 46079	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809145						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.466 1.0 10.00 0 105 85 115

Sample ID N012952-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: ZZZZZZ	Batch ID: 46079	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809151						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 15.960 1.0 10.00 5.729 102 75 125

Sample ID N012952-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94210						
Client ID: ZZZZZZ	Batch ID: 46079	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809152						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 15.517 1.0 10.00 5.729 97.9 75 125 15.96 2.82 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2 SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	CR(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS	
SAMPLE ID DATE TIME Matrix									
MW-838-059-Q3	7/15/2014	1330	Water	X				1	LB
MW-142S1-059-Q3	7/15/2014	1520	Water	X	X			2	LB
MW-142S2-059-Q3	7/15/2014	1326	Water	X	X			2	TH
MW-142S3-059-Q3	7/15/2014	1250	Water	X	X			2	LB
MW-166S1-059-Q3	7/15/2014	1202	Water	X	X			2	LB
MW-166S2-059-Q3	7/15/2014	1125	Water	X	X			2	LB
MW-167D-059-Q3	7/15/2014	0850	Water	X	X			2	LB
MW-989-059-Q3	7/15/2014	0855	Water	X	X			2	LB
MW-167S1-059-Q3	7/15/2014	1006	Water	X	X			2	LB
MW-167S2-059-Q3	7/15/2014	0928	Water	X	X			2	LB
SC-MW-16C-059-Q3	7/15/2014	1353	Water	X	X			2	JM
MW-839-059-Q3	7/15/2014	0845	Water	X				1	TH
MW-123S1-059-Q3	7/15/2014	0833	Water	X	X			2	TH
MW-123S2-059-Q3	7/15/2014	0925	Water	X	X			2	TH
MW-124D-059-Q3	7/15/2014	1226	Water	X	X			2	TH
MW-124S1-059-Q3	7/15/2014	1015	Water	X	X			2	TH

N012952-1

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-16

Signatures Approved by <i>K. Blum</i> Sampled by <i>Lee Burtz</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Date/Time 7/15/14 1555 7/15/14 7/15/14 1555 7/15/14 1555 7/15/14 1555 7/15/14 1555		Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3.7°C Airbill No: <i>1242</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	Number of Containers COMMENTS		
SAMPLE ID DATE TIME Matrix CR(M) (E218.6) FF Metals Dissolved (6020AFF) FF Cr								
MW-124S2-059-Q3	7/15/2014	1105	Water	X	X	NO12952-17	2	TH
TOTAL NUMBER OF CONTAINERS							32	

Approved by <i>K. Blinn</i> Sampled by <i>J. Bures</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/15/14 1555 7/15/14 7/15/14 1555 7/15/14 1557 7/15/14 1605 7/15/14 1605	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>2.7c</i> Airbill No: <i>1RTR</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/15/2014 Workorder: N012952
 Rep sample Temp (Deg C): 3.7 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: N/A Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

For: GG  7/16/2014

Reviewed By:

 07/17/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012952-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.016067 * 1 \\ &= 0.016067\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012952-017A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 2.2724 * 1 \\ &= 2.2724\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.3$$

 7/29/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012952-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 5.7293898871 * 1 * (25/25) \\ &= 5.7293898871 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 5.7$$

 7/29/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012952
Test Method: EPA 6020
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46079

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012952-002B-DT 5X	Chromium	µg/L	6.051315379	NA	5.729389887	5.62%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012952
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012952-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94210						
Client ID: ZZZZZ	Batch ID: 46079	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/18/2014	SeqNo: 1809150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	26.009	2.0	20.00	5.729	101	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 29, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012953

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 15, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012953

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012953
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012953-001A	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/29/2014
N012953-001B	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/29/2014
N012953-001C	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/29/2014
N012953-001D	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/29/2014
N012953-002A	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/29/2014
N012953-002B	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/29/2014
N012953-002C	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/29/2014
N012953-002D	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/29/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-43-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 9:21:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	540	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-62-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 1:31:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717E	QC Batch: 46081			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	730	10	10	mg/L	1	7/17/2014 08:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012953
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46081	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187
Client ID: PBW	Batch ID: 46081	TestNo: SM2540C	Analysis Date: 7/17/2014	SeqNo: 1807658	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	10			

Sample ID LCS-46081	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187
Client ID: LCSW	Batch ID: 46081	TestNo: SM2540C	Analysis Date: 7/17/2014	SeqNo: 1807659	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	941.000	10	1000	0	94.1 80 120

Sample ID N012944-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94187
Client ID: ZZZZZ	Batch ID: 46081	TestNo: SM2540C	Analysis Date: 7/17/2014	SeqNo: 1807661	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	655.000	10			653.0 0.306 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-43-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 9:21:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	11	0.011	0.67	pCi/L	1	7/18/2014 10:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-62-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 1:31:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	6.0	0.011	0.67	pCi/L	1	7/18/2014 10:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012953
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46091	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: PBW	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810221						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	ND	0.67									

Sample ID LCS-46091	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: LCSW	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	6.867	0.67	6.700	0	102	85	115				

Sample ID N012966-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810226						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	44.046	0.67	6.700	36.74	109	75	125				

Sample ID N012966-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810227						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	45.397	0.67	6.700	36.74	129	75	125	44.05	3.02	20	S

Sample ID N012966-011B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810240						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	87.507	0.67	6.700	84.92	38.6	75	125				S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 27-43-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 9:21:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163			PrepDate			Analyst: PS
Nitrate as N	6.6	0.051	0.50	mg/L	10		7/16/2014 01:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 29-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-62-059-Q3
Lab Order: N012953	Collection Date: 7/15/2014 1:31:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012953-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140716A	QC Batch: R94163	PrepDate	Analyst: PS
Nitrate as N	2.4 0.010 0.10	mg/L	2 7/16/2014 01:13 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012953
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94163_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163
Client ID: PBW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806498
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N ND 0.050

Sample ID LCS-R94163_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163
Client ID: LCSW	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806499
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 1.057 0.050 1.000 0 106 90 110

Sample ID N012953-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806508
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 6.550 0.50 6.650 1.52 20

Sample ID N012953-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806509
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 16.850 0.50 10.00 6.650 102 80 120

Sample ID N012953-001B-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94163
Client ID: ZZZZZ	Batch ID: R94163	TestNo: EPA 300.0		Analysis Date: 7/16/2014	SeqNo: 1806510
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 16.850 0.50 10.00 6.650 102 80 120 16.85 0 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/15/2014 Workorder: N012953
 Rep sample Temp (Deg C): 3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: N/A Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B For: GG *Alcortez* 7/16/2014

Reviewed By: *gg* 07/17/14



ASSET Laboratories

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www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Signed

16-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012953-001D / 27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	32OZP	1		
N012953-002D / 22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012953 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 1710 9199

Relinquished by: <u>ACortes</u> 7/16/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012953-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.7851-61.7315)*1000000}{100}$$

536 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 540 \text{ mg/L}$$


7/18/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/17/2014								TDS/CONDUCTIVITY
Date Finished: 7/18/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46081	100	63.3751	63.3751	0	1	0.00		
LCS-46081	100	63.5095	63.6036	941	1	941.00		
N012944-001C	100	63.997	64.0623	653	1	653.00	1045	0.62
N012944-001C-DUP	100	63.9763	64.0418	655	1	655.00	1045	0.63
N012944-002C	100	64.1093	64.1527	434	1	434.00	741	0.59
N012946-002C	100	63.7803	63.8315	512	1	512.00	803	0.64
N012946-003C	100	62.9956	63.0195	239	1	239.00	428	0.56
N012946-004C	100	61.3632	61.3908	276	1	276.00	431	0.64
N012947-023C	65	64.2779	64.3639	860	1.5384615	1323.08	2240	0.59
N012947-024C	70	63.8043	63.9059	1016	1.4285714	1451.43	2130	0.68
N012953-001C	100	61.7315	61.7851	536	1	536.00	874	0.61
N012953-002C	100	60.6396	60.7127	731	1	731.00	1133	0.65
N012963-011C	100	64.2568	64.2998	430	1	430.00	647	0.66
N012963-012C	100	58.3031	58.3475	444	1	444.00	651	0.68

gmc
7/18/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012953-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 16.5934413140837 * 1 * (25/25) * 0.67 \\ &= 11.1176056804361 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 11$$

Nancy 7/29/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012953
Test Method: EPA 200.8
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46091

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012966-001B-DT 5X	Uranium	pCi/L	36.36967474	PASS	36.737243	1.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012953
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012966-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8	Analysis Date: 7/18/2014	SeqNo: 1810225							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	51.903	1.3	13.40	36.74	113	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012953-001B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.665 * 10 \\ &= 6.65 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 6.6$$

 7/29/2014

August 11, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012953
Pace Project No.: 30125513

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012953
Pace Project No.: 30125513

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125513001	27-43-059-Q3	Water	07/15/14 09:21	07/22/14 09:15
30125513002	22-62-059-Q3	Water	07/15/14 13:31	07/22/14 09:15

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SAMPLE ANALYTE COUNT

Project: N012953
Pace Project No.: 30125513

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125513001	27-43-059-Q3	EPA 900.0	JAL	2
30125513002	22-62-059-Q3	EPA 900.0	JAL	2

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PROJECT NARRATIVE

Project: N012953
Pace Project No.: 30125513

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 11, 2014

General Information:

2 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: N012953
Pace Project No.: 30125513

Sample: 27-43-059-Q3 **Lab ID: 30125513001** Collected: 07/15/14 09:21 Received: 07/22/14 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	18.9 ± 4.82 (3.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-46-1	
Gross Beta	EPA 900.0	4.68 ± 1.54 (4.00) C:NA T:NA	pCi/L	07/29/14 10:05	12587-47-2	

Sample: 22-62-059-Q3 **Lab ID: 30125513002** Collected: 07/15/14 13:31 Received: 07/22/14 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	7.48 ± 2.55 (3.00) C:NA T:NA	pCi/L	07/29/14 18:58	12587-46-1	
Gross Beta	EPA 900.0	1.95 ± 1.42 (4.00) C:NA T:NA	pCi/L	07/29/14 18:58	12587-47-2	

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QUALITY CONTROL DATA

Project: N012953

Pace Project No.: 30125513

QC Batch: RADC/20651

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30125513001, 30125513002

METHOD BLANK: 763860

Matrix: Water

Associated Lab Samples: 30125513001, 30125513002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.037 ± 0.853 (2.23) C:NA T:NA	pCi/L	07/28/14 17:42	
Gross Beta	0.155 ± 0.686 (1.65) C:NA T:NA	pCi/L	07/28/14 17:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.assetlabs.com
 TEL: 7023072659 FAX: 7023072691



QC Level: Level IV

30125513

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

Field Sampler: Signed
 TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

16-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012953-001D / 27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	320ZP	1		001
N012953-002D / 22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	320ZP	1		002

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012953 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Date/Time		Date/Time	
Relinquished by: <i>Alorton</i>	7/16/2014	Received by: <i>Scott Durkin</i>	7-22-14 09/5
Relinquished by:	1500	Received by:	
FedEx#: 7706 1710 9199			



Sample Condition Upon Receipt

Client Name: ATL

Project # 30125513

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other []

Tracking #: 770617109199

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [X] Bubble Bags [] None [] Other []

Thermometer Used NA Type of Ice: Wet Blue [X] None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: SPA 7-22-14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of checklist items and checkboxes. Items include Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot # (if purchased).

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review:

Date: 7/23/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: **30125513**

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other	
100	fm																								
200	fm																								

Quality Control Sample Performance Assessment



Analyst: JAL
Date: 7/30/2014
Worklist: 20651
Matrix: Water

Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 763860

Method Blank Assessment						
Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	-0.0370	0.8530	2.2300	0.72500		
Gross Beta	0.1550	0.6860	1.6540	0.55800		

Laboratory Control Sample Assessment						
Analyte	LCS	LCSD	LCS	LCSD	LCS	LCSD
Gross Alpha	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16	7/29/14 9:16		
Count Date	13-048GA	13-048GA	13-047GB	13-047GB		
Spike I.D.	64.598	64.598	64.582	64.582		
Spike Concentration (pCi/L)	0.050	0.050	0.050	0.050		
Volume Used (mL)	0.204	0.203	0.204	0.203		
Alliquot Volume (L, g, F)	15.813	15.883	20.705	20.796		
Target Conc. (pCi/L, g, F)	0.558	0.560	1.258	1.264		
1.96 Sigma Uncertainty (Calculated)	13.364	11.808	21.671	22.950		
Result (pCi/L, g, F)	3.321	3.077	4.553	4.761		
1.96 Sigma Unc.	84.51%	74.34%	104.67%	110.55%		
% Recovery	Pass	Pass	Pass	Pass		
Assessment	121.00%	121.00%	130.00%	130.00%		
Upper % Recovery Limits	69.00%	69.00%	79.00%	79.00%		
Lower % Recovery Limits						

Duplicate Sample Assessment				
LCS/LCSD Y or N?	Y	Y	Y	Y
Gross Alpha	Gross Alpha	Gross Beta	Gross Beta	
LCS20651	LCS20651	LCS20651	LCS20651	
Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.	
LCSD20651	LCSD20651	LCSD20651	LCSD20651	
Duplicate Sample I.D.	Duplicate Sample I.D.	Duplicate Sample I.D.	Duplicate Sample I.D.	
13.3640	13.3640	21.6710	21.6710	
Sample Result (pCi/L, g, F)	Sample Result (pCi/L, g, F)	Sample Result (pCi/L, g, F)	Sample Result (pCi/L, g, F)	
3.3210	3.3210	4.5330	4.5330	
1.96 Sigma Unc.	1.96 Sigma Unc.	1.96 Sigma Unc.	1.96 Sigma Unc.	
11.8090	11.8090	22.9900	22.9900	
Sample Duplicate Result (pCi/L, g, F)	Sample Duplicate Result (pCi/L, g, F)	Sample Duplicate Result (pCi/L, g, F)	Sample Duplicate Result (pCi/L, g, F)	
3.0770	3.0770	4.7610	4.7610	
Duplicate Sample 1.96 Sigma Unc.	Duplicate Sample 1.96 Sigma Unc.	Duplicate Sample 1.96 Sigma Unc.	Duplicate Sample 1.96 Sigma Unc.	
NO	NO	NO	NO	
Either results below MDC?	Either results below MDC?	Either results below MDC?	Either results below MDC?	
12.36%	12.36%	5.91%	5.91%	
Relative Percent Difference	Relative Percent Difference	Relative Percent Difference	Relative Percent Difference	
Pass	Pass	Pass	Pass	
Assessment	Assessment	Assessment	Assessment	
34.00%	34.00%	29.00%	29.00%	
% RPD Limit	% RPD Limit	% RPD Limit	% RPD Limit	

Sample Matrix Spike Control Assessment				
Analyte	Gross Alpha	Gross Beta	Sample I.D.	Sample I.D.
Gross Alpha	7/14/2014	7/14/2014	30125514002	30125514002
Sample Collection Date	30125514002MS	30125514002MS	30125514002MS	30125514002MS
Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.
30125514002MS	30125514002MS	30125514002MS	30125514002MS	30125514002MS
Sample MS I.D.	Sample MS I.D.	Sample MS I.D.	Sample MS I.D.	Sample MS I.D.
13-048GA	13-048GA	13-048GA	13-048GA	13-048GA
Sample MSD I.D.	Sample MSD I.D.	Sample MSD I.D.	Sample MSD I.D.	Sample MSD I.D.
64.598	64.598	64.598	64.598	64.598
MS/MSD Decay Corrected Spike Conc. (pCi/L)	MS/MSD Decay Corrected Spike Conc. (pCi/L)	MS/MSD Decay Corrected Spike Conc. (pCi/L)	MS/MSD Decay Corrected Spike Conc. (pCi/L)	MS/MSD Decay Corrected Spike Conc. (pCi/L)
0.10	0.10	0.10	0.10	0.10
Spike Volume Used in MS (mL)	Spike Volume Used in MS (mL)	Spike Volume Used in MS (mL)	Spike Volume Used in MS (mL)	Spike Volume Used in MS (mL)
0.1502	0.1502	0.1502	0.1502	0.1502
MS Aliquot (L, g, F)	MS Aliquot (L, g, F)	MS Aliquot (L, g, F)	MS Aliquot (L, g, F)	MS Aliquot (L, g, F)
43.011	43.011	43.011	43.011	43.011
MS Target Conc. (pCi/L, g, F)	MS Target Conc. (pCi/L, g, F)	MS Target Conc. (pCi/L, g, F)	MS Target Conc. (pCi/L, g, F)	MS Target Conc. (pCi/L, g, F)
1.517	1.517	1.517	1.517	1.517
MSD Aliquot (L, g, F)	MSD Aliquot (L, g, F)	MSD Aliquot (L, g, F)	MSD Aliquot (L, g, F)	MSD Aliquot (L, g, F)
7.301	7.301	7.301	7.301	7.301
MSD Target Conc. (pCi/L, g, F)	MSD Target Conc. (pCi/L, g, F)	MSD Target Conc. (pCi/L, g, F)	MSD Target Conc. (pCi/L, g, F)	MSD Target Conc. (pCi/L, g, F)
2.618	2.618	2.618	2.618	2.618
MS Spike uncertainty (calculated)	MS Spike uncertainty (calculated)	MS Spike uncertainty (calculated)	MS Spike uncertainty (calculated)	MS Spike uncertainty (calculated)
48.458	48.458	48.458	48.458	48.458
MSD Spike uncertainty (calculated)	MSD Spike uncertainty (calculated)	MSD Spike uncertainty (calculated)	MSD Spike uncertainty (calculated)	MSD Spike uncertainty (calculated)
12.408	12.408	12.408	12.408	12.408
Sample Result	Sample Result	Sample Result	Sample Result	Sample Result
66.079	66.079	66.079	66.079	66.079
Sample 1.96 Sigma Unc.	Sample 1.96 Sigma Unc.	Sample 1.96 Sigma Unc.	Sample 1.96 Sigma Unc.	Sample 1.96 Sigma Unc.
12.718	12.718	12.718	12.718	12.718
Sample Matrix Spike Result	Sample Matrix Spike Result	Sample Matrix Spike Result	Sample Matrix Spike Result	Sample Matrix Spike Result
95.69%	95.69%	95.69%	95.69%	95.69%
Sample MSD 1.96 Sigma Unc.	Sample MSD 1.96 Sigma Unc.	Sample MSD 1.96 Sigma Unc.	Sample MSD 1.96 Sigma Unc.	Sample MSD 1.96 Sigma Unc.
114.42%	114.42%	114.42%	114.42%	114.42%
MS % Recovery	MS % Recovery	MS % Recovery	MS % Recovery	MS % Recovery
Pass	Pass	Pass	Pass	Pass
MS Assessment	MS Assessment	MS Assessment	MS Assessment	MS Assessment
121.00%	121.00%	121.00%	121.00%	121.00%
MS/MSD Upper % Recovery Limits	MS/MSD Upper % Recovery Limits	MS/MSD Upper % Recovery Limits	MS/MSD Upper % Recovery Limits	MS/MSD Upper % Recovery Limits
69.00%	69.00%	69.00%	69.00%	69.00%
MS/MSD Lower % Recovery Limits	MS/MSD Lower % Recovery Limits	MS/MSD Lower % Recovery Limits	MS/MSD Lower % Recovery Limits	MS/MSD Lower % Recovery Limits
Matrix Spike/Matrix Spike Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature

July 22, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012954

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 15, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012954

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.704 ug/L) and hexavalent chromium (1.202 ug/L) for sample N012954-008 (28-36-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.776 and 2.618 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 22-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012954
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012954-001A	BGS-16-059-Q3	Groundwater	7/15/2014 8:20:00 AM	7/15/2014	7/22/2014
N012954-001B	BGS-16-059-Q3	Groundwater	7/15/2014 8:20:00 AM	7/15/2014	7/22/2014
N012954-002A	03-17-059-Q3	Groundwater	7/15/2014 9:30:00 AM	7/15/2014	7/22/2014
N012954-002B	03-17-059-Q3	Groundwater	7/15/2014 9:30:00 AM	7/15/2014	7/22/2014
N012954-003A	28-20-059-Q3	Groundwater	7/15/2014 10:30:00 AM	7/15/2014	7/22/2014
N012954-003B	28-20-059-Q3	Groundwater	7/15/2014 10:30:00 AM	7/15/2014	7/22/2014
N012954-004A	01-01A-059-Q3	Groundwater	7/15/2014 11:12:00 AM	7/15/2014	7/22/2014
N012954-004B	01-01A-059-Q3	Groundwater	7/15/2014 11:12:00 AM	7/15/2014	7/22/2014
N012954-005A	34-66-059-Q3	Groundwater	7/15/2014 8:30:00 AM	7/15/2014	7/22/2014
N012954-005B	34-66-059-Q3	Groundwater	7/15/2014 8:30:00 AM	7/15/2014	7/22/2014
N012954-006A	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/22/2014
N012954-006B	27-43-059-Q3	Groundwater	7/15/2014 9:21:00 AM	7/15/2014	7/22/2014
N012954-007A	34-65-059-Q3	Groundwater	7/15/2014 10:43:00 AM	7/15/2014	7/22/2014
N012954-007B	34-65-059-Q3	Groundwater	7/15/2014 10:43:00 AM	7/15/2014	7/22/2014
N012954-008A	28-36-059-Q3	Groundwater	7/15/2014 11:36:00 AM	7/15/2014	7/22/2014
N012954-008B	28-36-059-Q3	Groundwater	7/15/2014 11:36:00 AM	7/15/2014	7/22/2014
N012954-009A	33-28-059-Q3	Groundwater	7/15/2014 12:16:00 PM	7/15/2014	7/22/2014
N012954-009B	33-28-059-Q3	Groundwater	7/15/2014 12:16:00 PM	7/15/2014	7/22/2014
N012954-010A	33-09-059-Q3	Groundwater	7/15/2014 12:50:00 PM	7/15/2014	7/22/2014
N012954-010B	33-09-059-Q3	Groundwater	7/15/2014 12:50:00 PM	7/15/2014	7/22/2014
N012954-011A	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/22/2014
N012954-011B	22-62-059-Q3	Groundwater	7/15/2014 1:31:00 PM	7/15/2014	7/22/2014
N012954-012A	02N-02-059-Q3	Groundwater	7/15/2014 1:02:00 PM	7/15/2014	7/22/2014
N012954-012B	02N-02-059-Q3	Groundwater	7/15/2014 1:02:00 PM	7/15/2014	7/22/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: BGS-16-059-Q3
Lab Order: N012954	Collection Date: 7/15/2014 8:20:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012954-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716A	QC Batch: R94173				PrepDate		Analyst: RB
Hexavalent Chromium	0.79	0.016	0.20		µg/L	1	7/16/2014 07:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/17/2014 12:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-002

Client Sample ID: 03-17-059-Q3
Collection Date: 7/15/2014 9:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716A	QC Batch: R94173				PrepDate		Analyst: RB
Hexavalent Chromium	3.6	0.016	0.20		µg/L	1	7/16/2014 07:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	3.6	0.030	1.0		µg/L	1	7/17/2014 12:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 28-20-059-Q3
Lab Order: N012954	Collection Date: 7/15/2014 10:30:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012954-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	0.74	0.016	0.20		µg/L	1	7/16/2014 08:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/17/2014 01:02 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 01-01A-059-Q3
Lab Order: N012954	Collection Date: 7/15/2014 11:12:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012954-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	0.94	0.016	0.20		µg/L	1	7/16/2014 09:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	7/17/2014 01:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-005

Client Sample ID: 34-66-059-Q3
Collection Date: 7/15/2014 8:30:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/16/2014 09:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/17/2014 01:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-006

Client Sample ID: 27-43-059-Q3
Collection Date: 7/15/2014 9:21:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/16/2014 10:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/17/2014 01:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-007

Client Sample ID: 34-65-059-Q3
Collection Date: 7/15/2014 10:43:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/16/2014 10:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	7/17/2014 01:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL	Client Sample ID: 28-36-059-Q3
Lab Order: N012954	Collection Date: 7/15/2014 11:36:00 AM
Project: PGE Hinkley, 492584.UR.DM.FW	Matrix: GROUNDWATER
Lab ID: N012954-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/16/2014 10:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/17/2014 01:41 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-009

Client Sample ID: 33-28-059-Q3
Collection Date: 7/15/2014 12:16:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	0.75	0.016	0.20		µg/L	1	7/16/2014 11:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/17/2014 01:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-010

Client Sample ID: 33-09-059-Q3
Collection Date: 7/15/2014 12:50:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	0.47	0.016	0.20		µg/L	1	7/16/2014 11:27 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/17/2014 01:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-011

Client Sample ID: 22-62-059-Q3
Collection Date: 7/15/2014 1:31:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/17/2014 12:04 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/17/2014 01:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 22-Jul-14

CLIENT: CH2M HILL
Lab Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012954-012

Client Sample ID: 02N-02-059-Q3
Collection Date: 7/15/2014 1:02:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140719A	QC Batch: R94222				PrepDate		Analyst: RB
Hexavalent Chromium	0.083	0.012	0.060		µg/L	1	7/19/2014 08:19 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140716B	QC Batch: R94178				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/17/2014 12:23 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140717A	QC Batch: 46077				PrepDate	7/17/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/17/2014 02:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94222	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: PBW	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810121						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94222	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: LCSW	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810122						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.193 0.060 0.2000 0 96.4 90 110

Sample ID N012957-015ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810124						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.654 0.060 0.6582 0.707 20

Sample ID N012968-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810126						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID N012968-016AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810127						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.199 0.060 0.2000 0 99.3 90 110 0.2036 2.46 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012951-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01335	106	90	110				

Sample ID N012951-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810139						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N012952-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810146						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01607	103	90	110				

Sample ID N012952-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810148						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.03429	109	90	110				

Sample ID N012952-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810150						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.251	0.060	0.2000	0.04380	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810152						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				

Sample ID N012952-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810156						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01306	101	90	110				

Sample ID N012952-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0	101	90	110				

Sample ID N012952-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810160						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103	90	110				

Sample ID N012952-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810162						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.05231	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012952-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810164						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0	104	90	110				

Sample ID N012954-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810168						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.279	0.060	0.2000	0.08308	97.8	90	110				

Sample ID N012963-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810170						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	102	90	110				

Sample ID N012963-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94222						
Client ID: ZZZZZZ	Batch ID: R94222	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810172						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94173	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: PBW	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94173	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: LCSW	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807277						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.748	0.20	5.000	0	95.0	90	110				
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Sample ID N012945-032A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.064	0.20						5.030	0.668	20	
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Sample ID N012945-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.024	0.20	5.000	5.030	99.9	90	110				
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Sample ID N012945-032A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807284						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.029	0.20	5.000	5.030	100	90	110	10.02	0.0499	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012945-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.970	0.20	5.000	4.978	99.8	90	110				

Sample ID N012945-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.268	0.20	5.000	4.299	99.4	90	110				

Sample ID N012945-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.244	0.20	5.000	4.267	99.5	90	110				

Sample ID N012945-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.403	0.20	5.000	4.584	96.4	90	110				

Sample ID N012931-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807297						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	14.415	0.20	5.000	9.799	92.3	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012954-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807327							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.815	0.20	1.000	0.7914	102	90	110				

Sample ID N012954-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94173						
Client ID: ZZZZZZ	Batch ID: R94173	TestNo: EPA 218.6	Analysis Date: 7/16/2014	SeqNo: 1807329							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.568	0.20	1.000	3.611	95.8	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94178	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: PBW	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20
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Sample ID LCS-R94178	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: LCSW	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.883	0.20	5.000	0	97.7	90	110
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Sample ID N012954-003A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.761	0.20				0.7438	2.34	20
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Sample ID N012954-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.781	0.20	1.000	0.7438	104	90	110
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Sample ID N012954-003A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.743	0.20	1.000	0.7438	99.9	90	110	1.781	2.16	20
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012954-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807488						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.961	0.20	1.000	0.9355	103	90	110				

Sample ID N012954-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807490						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.476	0.20	1.000	1.454	102	90	110				

Sample ID N012954-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807494						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.353	0.20	1.000	1.356	99.7	90	110				

Sample ID N012954-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807496						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.091	0.20	1.000	3.100	99.1	90	110				

Sample ID N012954-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.253	0.20	1.000	1.202	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012954-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.775	0.20	1.000	0.7451	103	90	110				

Sample ID N012954-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/16/2014	SeqNo: 1807502						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.499	0.20	1.000	0.4684	103	90	110				

Sample ID N012954-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807506						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.196	0.20	1.000	1.154	104	90	110				

Sample ID N012954-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94178						
Client ID: ZZZZZZ	Batch ID: R94178	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1807508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0.07760	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46077	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: PBW	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806750						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46077	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: LCSW	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.010 1.0 10.00 0 100 85 115

Sample ID N012954-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: ZZZZZZ	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.282 1.0 10.00 0.8578 84.2 75 125

Sample ID N012954-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/17/2014	RunNo: 94168						
Client ID: ZZZZZZ	Batch ID: 46077	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806756						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.445 1.0 10.00 0.8578 95.9 75 125 9.282 11.8 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C HNO3, 4°C Filtered: Field Field Holding Time (days): 28 180		CR(V) (E218.6) FF Metals Dissolved (6020A(FF)) FF Cr	Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix						
BGS-16-059-Q3	7/15/14	0820	GW	X	X		RC	2	House of Faith
03-17-059-Q3	7/15/14	0930	GW	X	X		RC	2	Cheney
28-20-059-Q3	7/15/14	1030	GW	X	X		RC	2	Adair
01-01A-059-Q3	7/15/14	1112	GW	X	X		JM	2	Simpson
34-66-059-Q3	7/15/14	0830	GW	X	X		JM	2	Escobedo
27-43-059-Q3	7/15/14	0921	GW	X	X		JM	2	Bible Church
34-65-059-Q3	7/15/14	1043	GW	X	X		JM	2	Escobedo
28-36-059-Q3	7/15/14	1136	GW	X	X		RC	2	Burns
33-28-059-Q3	7/15/14	1216	GW	X	X		RC	2	Diaz
33-09-059-Q3	7/15/14	1250	GW	X	X		RC	2	Diaz
22-62-059-Q3	7/15/14	1331	GW	X	X		RC	2	Hendryx
02N-02-059-Q3	7/15/14	1302	GW	X	X		JM	2	Gillette
TOTAL NUMBER OF CONTAINERS								24	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Signatures Date/Time 7/15/14 1545 7-15-14 1547 7-15-14 1547 7/15/14 1547 7/15/14 1547 7/15/14 1547		Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3-52 Airbill No: <i>[Signature]</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN:		Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/15/2014 Workorder: N012954
 Rep sample Temp (Deg C): 3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: N/A Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

For: GG ACortez 7/16/2014

Reviewed By:

808 07/17/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012954-012A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.083078 * 1 \\ &= 0.083078\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.083}$$

 7/22/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012954-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.7914 * 1 \\ &= 0.7914\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.79$$

 7/22/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012954-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.6152529723 * 1 * (25/25) \\ &= 3.6152529723 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.6$$

Nancy

7/22/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012954
Test Method: EPA 6020
Analysis Date: 7/17/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46077

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012954-001B-DT 5X	Chromium	µg/L	0.816053226	NA	0.857808097	4.87%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012954
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012954-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94168						
Client ID: ZZZZZ	Batch ID: 46077	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/17/2014	SeqNo: 1806754							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.079	2.0	20.00	0.8578	96.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 23, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012964

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 16, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012964

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012964
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012964-001A	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/16/2014	7/23/2014
N012964-001B	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/16/2014	7/23/2014
N012964-002A	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/16/2014	7/23/2014
N012964-002B	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/16/2014	7/23/2014
N012964-003A	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/16/2014	7/23/2014
N012964-003B	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/16/2014	7/23/2014
N012964-004A	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/16/2014	7/23/2014
N012964-004B	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/16/2014	7/23/2014
N012964-005A	33-11-059-Q3	Groundwater	7/16/2014 12:24:00 PM	7/16/2014	7/23/2014
N012964-005B	33-11-059-Q3	Groundwater	7/16/2014 12:24:00 PM	7/16/2014	7/23/2014
N012964-006A	34-57-059-Q3	Groundwater	7/16/2014 11:46:00 AM	7/16/2014	7/23/2014
N012964-006B	34-57-059-Q3	Groundwater	7/16/2014 11:46:00 AM	7/16/2014	7/23/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-001

Client Sample ID: 22-75-059-Q3
Collection Date: 7/16/2014 8:55:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/18/2014 12:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/19/2014 01:52 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-002

Client Sample ID: 99-09-059-Q3
Collection Date: 7/16/2014 9:05:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/18/2014 12:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	7/19/2014 02:47 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-003

Client Sample ID: 22-30-059-Q3
Collection Date: 7/16/2014 9:36:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/18/2014 01:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/19/2014 02:53 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-004

Client Sample ID: 34-38-059-Q3
Collection Date: 7/16/2014 10:29:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 11:33 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 01:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/19/2014 02:58 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-005

Client Sample ID: 33-11-059-Q3
Collection Date: 7/16/2014 12:24:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	5.0	0.016	0.20		µg/L	1	7/18/2014 02:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	5.4	0.030	1.0		µg/L	1	7/19/2014 03:04 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 23-Jul-14

CLIENT: CH2M HILL
Lab Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012964-006

Client Sample ID: 34-57-059-Q3
Collection Date: 7/16/2014 11:46:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 12:04 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 02:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46087				PrepDate	7/18/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/19/2014 03:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94244	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: PBW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811174
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94244	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: LCSW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811175
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.204	0.060	0.2000	0	102 90 110

Sample ID N012964-004ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811177
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.015	0.060			0.01719 0 20

Sample ID N012964-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811178
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01719	97.2 90 110

Sample ID N012964-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811180
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.228	0.060	0.2000	0.03366	97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012964-006AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.03366	96.2	90	110	0.2276	0.707	20	

Sample ID N012973-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012972-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.02599	103	90	110				

Sample ID N012975-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012976-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.060	0.2000	0	99.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.264	0.060	0.2000	0.04537	109	90	110				

Sample ID N012976-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811197						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01356	102	90	110				

Sample ID N012976-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.309	0.060	0.2000	0.1141	97.4	90	110				

Sample ID N012976-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811201						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.04489	104	90	110				

Sample ID N012976-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01782	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.01986	106	90	110				

Sample ID N012976-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03928	102	90	110				

Sample ID N012976-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03385	105	90	110				

Sample ID N012976-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.02070	103	90	110				

Sample ID N012976-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01206	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94203	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: PBW	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20
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Sample ID LCS-R94203	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: LCSW	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808346						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.986	0.20	5.000	0	99.7	90	110
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Sample ID N012966-013A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808353						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.757	0.20						2.741	0.578	20
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Sample ID N012966-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808356						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.820	0.20	5.000	2.741	102	90	110
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Sample ID N012966-013A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808357						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.804	0.20	5.000	2.741	101	90	110	7.820	0.206	20
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012966-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808358						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.197	0.20	5.000	1.003	104	90	110
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Sample ID N012966-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.689	0.20	5.000	4.484	104	90	110
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Sample ID N012966-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.804	0.20	5.000	5.707	102	90	110
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Sample ID N012964-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.725	0.20	5.000	1.727	99.9	90	110
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Sample ID N012964-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.845	0.20	5.000	1.774	101	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012964-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.280	0.20	5.000	2.240	101	90	110				

Sample ID N012964-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID N012964-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.003	0.20	5.000	4.978	101	90	110				

Sample ID N012964-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808374						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.070	0.20	1.000	0.05190	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46087	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: PBW	Batch ID: 46087	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810334						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46087	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: LCSW	Batch ID: 46087	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 8.804 1.0 10.00 0 88.0 85 115

Sample ID N012964-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZZ	Batch ID: 46087	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.595 1.0 10.00 1.635 99.6 75 125

Sample ID N012964-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZZ	Batch ID: 46087	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.614 1.0 10.00 1.635 99.8 75 125 11.60 0.161 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley				Container:		Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS	
Location Hinkley				Preservatives:					
Project Number 492584.UR.DM.FW				Filtered:					
Project Manager Jennifer Low				Holding Time (days):					
Sample Manager Jim Hanvey				28	180				
Cell Number (404) 229-2181				Cr(VI) (E218.6) FF					
Fax Number (510) 622-9136									
Task Order 59									
Project 2014-DOM-059-Q3									
Turnaround Time 5 Days									
Shipping Date:									
COC Number:									
SAMPLE ID	DATE	TIME	Matrix						
22-75-059-Q3	7/16/14	0855	GW	X	X	NO12964-1 ↓ -2 -3 -4 -5 -6	JM	2	Burns
99-09-059-Q3	7/16/14	0905	GW	X	X		JM	2	
22-30-059-Q3	7/16/14	0936	GW	X	X		JM	2	Peterson
34-38-059-Q3	7/16/14	1029	GW	X	X		JM	2	Greenwood
33-11-059-Q3	7/16/14	1224	GW	X	X		JM	2	Pearce
34-57-059-Q3	7/16/14	1146	GW	X	X		JM	2	Carson
TOTAL NUMBER OF CONTAINERS							12		

Signatures Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7/16/14 1700 7-16-14 1701 7-16-14 1701 7/16/14 1701 7/16/14 2000 7/16/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <i>2, SO2, IP#2</i> Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/16/2014 Workorder: N012964
 Rep sample Temp (Deg C): 2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC  7/17/2014

Reviewed By:  07/21/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012964-004A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.017191 * 1 \\ &= 0.017191\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/23/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012964-005A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 4.9779 * 1 \\ &= 4.9779\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 5.0$$

 7/23/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012964-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.6345604069 * 1 * (25/25) \\ &= 1.6345604069 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.6$$

 7/23/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012964
Test Method: EPA 6020
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46087

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012964-001B-DT 5X	Chromium	µg/L	1.583646633	NA	1.634560407	3.11%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012964
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012964-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46087	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810338						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.095	2.0	20.00	1.635	97.3	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

July 30, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012965

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 16, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012965

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) on QC sample N012977-004B-MS is outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 30-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012965
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012965-001A	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/17/2014	7/30/2014
N012965-001B	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/17/2014	7/30/2014
N012965-001C	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/17/2014	7/30/2014
N012965-001D	22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	7/17/2014	7/30/2014
N012965-002A	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/17/2014	7/30/2014
N012965-002B	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/17/2014	7/30/2014
N012965-002C	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/17/2014	7/30/2014
N012965-002D	99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	7/17/2014	7/30/2014
N012965-003A	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/17/2014	7/30/2014
N012965-003B	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/17/2014	7/30/2014
N012965-003C	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/17/2014	7/30/2014
N012965-003D	22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	7/17/2014	7/30/2014
N012965-004A	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/17/2014	7/30/2014
N012965-004B	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/17/2014	7/30/2014
N012965-004C	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/17/2014	7/30/2014
N012965-004D	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/17/2014	7/30/2014
N012965-004E	34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	7/17/2014	7/30/2014
N012965-005A	34-50-059-Q3b	Groundwater	7/16/2014 4:35:00 PM	7/17/2014	7/30/2014
N012965-005B	34-50-059-Q3b	Groundwater	7/16/2014 4:35:00 PM	7/17/2014	7/30/2014
N012965-005C	34-50-059-Q3b	Groundwater	7/16/2014 4:35:00 PM	7/17/2014	7/30/2014
N012965-005D	34-50-059-Q3b	Groundwater	7/16/2014 4:35:00 PM	7/17/2014	7/30/2014
N012965-005E	34-50-059-Q3b	Groundwater	7/16/2014 4:35:00 PM	7/17/2014	7/30/2014
N012965-006A	99-17-059-Q3b	Groundwater	7/16/2014 4:45:00 PM	7/17/2014	7/30/2014
N012965-006B	99-17-059-Q3b	Groundwater	7/16/2014 4:45:00 PM	7/17/2014	7/30/2014
N012965-006C	99-17-059-Q3b	Groundwater	7/16/2014 4:45:00 PM	7/17/2014	7/30/2014
N012965-006D	99-17-059-Q3b	Groundwater	7/16/2014 4:45:00 PM	7/17/2014	7/30/2014
N012965-006E	99-17-059-Q3b	Groundwater	7/16/2014 4:45:00 PM	7/17/2014	7/30/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-75-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 8:55:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	700	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-09-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:05:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	700	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-30-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	470	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	270	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	34-50-059-Q3b
Lab Order:	N012965	Collection Date:	7/16/2014 4:35:00 PM
Project:	PGE Hinkley, 492584.UR.AU	Matrix:	GROUNDWATER
Lab ID:	N012965-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	310	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-17-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	330	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46082	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: PBW	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807681						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46082	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: LCSW	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		926.000	10	1000	0	92.6	80	120			

Sample ID N012965-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: ZZZZZ	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807684						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		699.000	10					703.0	0.571	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-75-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 8:55:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	7.3	0.011	0.67	pCi/L	1	7/23/2014 11:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-09-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:05:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	7.5	0.011	0.67	pCi/L	1	7/23/2014 11:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-30-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118	PrepDate: 7/21/2014	Analyst: CEI
Uranium	7.5 0.011 0.67	pCi/L	1 7/23/2014 11:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	ND	0.011	0.67	pCi/L	1	7/23/2014 11:54 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-50-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:35:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate: 7/21/2014		Analyst: CEI
Uranium	4.8	0.011	0.67	pCi/L	1	7/24/2014 12:00 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-17-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118	PrepDate: 7/21/2014	Analyst: CEI
Uranium	5.0 0.011 0.67	pCi/L	1 7/24/2014 12:06 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46118	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: PBW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812788
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46118	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: LCSW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812789
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	6.627	0.67	6.700	0	98.9 85 115

Sample ID N012965-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812795
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	15.140	0.67	6.700	7.264	118 75 125

Sample ID N012965-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812796
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	14.903	0.67	6.700	7.264	114 75 125 15.14 1.58 20

Sample ID N012977-004B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/24/2014	SeqNo: 1812809
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	81.366	0.67	6.700	69.45	178 75 125 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-75-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 8:55:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate		Analyst: PS
Nitrate as N	3.7	0.026	0.25	mg/L	5	7/17/2014 10:29 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-09-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:05:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate		Analyst: PS
Nitrate as N	3.6	0.010	0.10	mg/L	2	7/17/2014 02:31 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 22-30-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 9:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate		Analyst: PS
Nitrate as N	3.4	0.010	0.10	mg/L	2	7/17/2014 04:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171	PrepDate	Analyst: PS
Nitrate as N	0.16 0.0051	0.050	mg/L 1 7/17/2014 01:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-50-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:35:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171	PrepDate	Analyst: PS
Nitrate as N	0.40 0.0051	0.050 mg/L	1 7/17/2014 02:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	99-17-059-Q3b
Lab Order:	N012965	Collection Date:	7/16/2014 4:45:00 PM
Project:	PGE Hinkley, 492584.UR.AU	Matrix:	GROUNDWATER
Lab ID:	N012965-006		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171	PrepDate	Analyst: PS
Nitrate as N	0.39 0.0051	0.050	mg/L 1 7/17/2014 02:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94171_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: PBW	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID LCS-R94171_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: LCSW	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807103						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.060	0.050	1.000	0	106	90	110				

Sample ID N012969-001A-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807106						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.374	0.050						0.3470	7.49	20	

Sample ID N012969-001A-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807107						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.350	0.050	1.000	0.3470	100	80	120				

Sample ID N012969-001A-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.374	0.050	1.000	0.3470	103	80	120	1.350	1.76	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012965-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807111						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	3.470	0.25						3.665	5.47	20	

Sample ID N012965-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.580	0.25	5.000	3.665	98.3	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140717A	QC Batch: R94183			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/18/2014 02:12 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012965
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012965-005

Client Sample ID: 34-50-059-Q3b
Collection Date: 7/16/2014 4:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	7/19/2014 08:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-17-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/19/2014 08:59 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94183	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183
Client ID: PBW	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807604
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94183	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183
Client ID: LCSW	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807605
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.623	1.0	10.00	0	106	85	115				
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Sample ID N012929-035D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183
Client ID: ZZZZZ	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807606
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.756	1.0	10.00	0.5212	102	75	125				
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Sample ID N012929-035D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94183
Client ID: ZZZZZ	Batch ID: R94183	TestNo: SM 5310C		Analysis Date: 7/17/2014	SeqNo: 1807607
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.829	1.0	10.00	0.5212	103	75	125	10.76	0.677	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94219	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: PBW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94219	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: LCSW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.696 1.0 10.00 0 107 85 115

Sample ID N012965-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.539 1.0 10.00 0.1124 104 75 125

Sample ID N012965-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.365 1.0 10.00 0.1124 103 75 125 10.54 1.67 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140718A	QC Batch: 46094	PrepDate: 7/18/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/18/2014 02:29 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** 34-50-059-Q3b
Lab Order: N012965 **Collection Date:** 7/16/2014 4:35:00 PM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012965-005

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140718A** QC Batch: **46094** PrepDate: **7/18/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 7/18/2014 02:33 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 99-17-059-Q3b
Lab Order: N012965	Collection Date: 7/16/2014 4:45:00 PM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140718A	QC Batch: 46094	PrepDate: 7/18/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1 7/18/2014 02:38 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46094	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/18/2014	RunNo: 94215
Client ID: PBW	Batch ID: 46094	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809959
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46094	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/18/2014	RunNo: 94215
Client ID: LCSW	Batch ID: 46094	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809960
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.099 0.020 0.1000 0 98.7 85 115

Sample ID N012961-026B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/18/2014	RunNo: 94215
Client ID: ZZZZZ	Batch ID: 46094	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809966
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.146 0.020 0.1000 0.04536 101 75 125

Sample ID N012961-026B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/18/2014	RunNo: 94215
Client ID: ZZZZZ	Batch ID: 46094	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809967
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.137 0.020 0.1000 0.04536 91.5 75 125 0.1463 6.69 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: 34-38-059-Q3
Lab Order: N012965	Collection Date: 7/16/2014 10:29:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012965-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140718B	QC Batch: 46088			PrepDate	7/18/2014	Analyst: CEI	
Arsenic	12	0.027	0.10		µg/L	1	7/19/2014 06:39 AM
Manganese	13	0.026	0.50		µg/L	1	7/19/2014 06:39 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012965
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012965-005

Client Sample ID: 34-50-059-Q3b
Collection Date: 7/16/2014 4:35:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46088				PrepDate	7/18/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10		µg/L	1	7/19/2014 06:44 AM
Manganese	ND	0.026	0.50		µg/L	1	7/19/2014 06:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012965
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012965-006

Client Sample ID: 99-17-059-Q3b
Collection Date: 7/16/2014 4:45:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140718B	QC Batch: 46088				PrepDate	7/18/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10		µg/L	1	7/19/2014 06:50 AM
Manganese	ND	0.026	0.50		µg/L	1	7/19/2014 06:50 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46088	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225
Client ID: PBW	Batch ID: 46088	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/19/2014	SeqNo: 1810422
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46088	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225
Client ID: LCSW	Batch ID: 46088	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/19/2014	SeqNo: 1810423
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.356	0.10	10.00	0	104 85 115
Manganese	93.399	0.50	100.0	0	93.4 85 115

Sample ID N012963-020B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225
Client ID: ZZZZZ	Batch ID: 46088	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/19/2014	SeqNo: 1810427
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	44.792	0.10	10.00	34.53	103 75 125
Manganese	108.861	0.50	100.0	0	109 75 125

Sample ID N012963-020B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94225
Client ID: ZZZZZ	Batch ID: 46088	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/19/2014	SeqNo: 1810428
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	43.085	0.10	10.00	34.53	85.5 75 125 44.79 3.89 20
Manganese	105.767	0.50	100.0	0	106 75 125 108.9 2.88 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name	Location	Project Number	Project Manager	Sample Manager	Cell Number	Fax Number	Task Order	Project	Turnaround Time	Shipping Date:	COC Number:	Container:	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	2x1000 ml Poly	Number of Containers	COMMENTS		
												Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	HNO3			Filtered:	Field
												Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Mn	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	TOC (E5310)	Gross Alpha/Beta (SM7110B/E900)					
SAMPLE ID	DATE	TIME	Matrix																				
22-75-059-Q3	7/16/14	0855	GW																				
99-09-059-Q3	7/16/14	0905	GW																				
22-30-059-Q3	7/16/14	0936	GW																				
34-38-059-Q3	7/16/14	1029	GW	X	X	X	X	X	X	X	X												
34-50-059-Q3b	7/16/14	1635	GW	X	X	X	X	X	X	X	X												
99-17-059-Q3b	7/16/14	1645	GW	X	X	X	X	X	X	X	X												
TOTAL NUMBER OF CONTAINERS																				39			

Signatures Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>	Date/Time 7/16/14 1700 7-16-14 1701 7-16-14 1701 7/16/14 1701 7/16/14 1701 7/16/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>3-8-2</i> Airbill No: <i>IR#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/16/2014 Workorder: N012965
 Rep sample Temp (Deg C): 3.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC  7/17/2014

Reviewed By:  07/21/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Signed

17-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012965-001D / 22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	32OZP	1		
N012965-002D / 99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	32OZP	1		
N012965-003D / 22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	32OZP	1		
N012965-004E / 34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	32OZP	1		
N012965-005E / 34-50-059-Q3	Groundwater	7/16/2014 4:35:00 PM	32OZP	1		
N012965-006E / 99-17-059-Q3	Groundwater	7/16/2014 4:45:00 PM	32OZP	1		

FedEx#'s: 7706 3199 4558
7706 3199 4812
7706 3199 4466

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012965 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

	Date/Time		Date/Time
Relinquished by: <u>ACortez</u> 7/17/2014	1700	Received by: _____	
Relinquished by: _____		Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012965-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.3814-60.3111)*1000000}{100}$$

703 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 700 \text{ mg/L}$$


7/18/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/17/2014								TDS/CONDUCTIVITY
Date Finished: 7/18/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46082	100	60.6703	60.6704	1	1	1.00		
LCS-46082	100	62.4455	62.5381	926	1	926.00		
N012965-001C	100	60.3111	60.3814	703	1	703.00	1033	0.68
N012965-001C-DUP	100	60.3417	60.4116	699	1	699.00	1033	0.68
N012965-002C	100	60.5339	60.6034	695	1	695.00	1045	0.67
N012965-003C	100	61.1342	61.1808	466	1	466.00	784	0.59
N012965-004C	100	60.4426	60.4698	272	1	272.00	398	0.68
N012965-005C	100	61.3124	61.3432	308	1	308.00	507	0.61
N012965-006C	100	61.1205	61.1536	331	1	331.00	493	0.67
N012966-001D	100	60.7714	60.8985	1271	1	1271.00	1707	0.74
N012966-002D	60	59.9072	60.0203	1131	1.6666667	1885.00	2370	0.80
N012966-003D	35 65	61.6765	61.8006	1241	1.5384615 2.857	3545.71 1909.23	4930 3930	0.72 0.49
N012966-004D	100	59.9007	59.9968	961	1	961.00	1328	0.72
N012966-005D	100	61.2156	61.3105	949	1	949.00	1320	0.72
N012966-006D	100	60.8342	60.9516	1174	1	1174.00	1605	0.73
N012966-007D	55	59.6096	59.7205	1109	1.8181818	2016.36	2620	0.77

Jmer
7/18/2014

Nancy
7/30/2014
for

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N012965-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 10.8414990441399 * 1 * (25/25) * 0.67 \\ &= 7.26380435957373 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 7.3$$

 7/30/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012965
Test Method: EPA 200.8
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46118

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012965-001A-DT 5X	Uranium	pCi/L	7.311465653	PASS	7.26380436	0.66%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012965-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8	Analysis Date: 7/23/2014	SeqNo: 1812792							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	21.589	1.3	13.40	7.264	107	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012965-001B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.733 * 5 \\ &= 3.665 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 3.7$$

 7/30/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [\quad \mathbf{A} \quad] [\quad \mathbf{DF} \quad] - \quad \mathbf{B}$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012965-005D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [\quad 0.19730 \quad] [\quad 1 \quad] - 0.08490$$

$$\text{TOC} = 0.11240$$

Reporting results in two significant figures,

$$\text{TOC} = \quad \mathbf{0.11} \quad \text{mg/L}$$

$$\text{TOC} = \quad \mathbf{ND}$$

PS 7/30/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012965-004A**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.017091448 * 1 * (25/25) \\ &= 0.017091448 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.017$$

Since PQL of Iron is 0.02 mg/L,

$$\text{Iron, mg/L} = \text{ND}$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012965
Test Method: EPA 6010
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46094

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012961-026B-DT 5X	Iron	mg/L	0.050697205	NA	0.045356051	11.78%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012961-026B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94215						
Client ID: ZZZZZ	Batch ID: 46094	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/18/2014	SeqNo: 1809965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	4.678	0.040	5.000	0.04536	92.6	80	120				
------	-------	-------	-------	---------	------	----	-----	--	--	--	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012965-004A**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 12.185743121 * 1 * (25/25) \\ &= 12.185743121 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 12$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012965
Test Method: EPA 6020
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46088

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments: _____
for _____

Analyzed By: Mary Claire Ignacio

Dilution test failed to As & Mn. However, PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012963-020B-DT 5X	Arsenic	µg/L	9.870811268	FAIL	34.53421395	71.42%	10
N012963-020B-DT 5X	Manganese	µg/L	113.63333	FAIL	0		10

Note: NA - Not applicable

not reported



7/30/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012965
Test Method: EPA 6020
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46088

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test not applicable to Mn. However, PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012963-020B-DT 5X	Arsenic	µg/L	35.54188	PASS	34.53421395	2.92%	10
N012963-020B-DT 5X	Manganese	µg/L		NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012965
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012963-020B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46088	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/19/2014	SeqNo: 1810426						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	52.986	0.20	20.00	34.53	92.3	80	120				
Manganese	206.929	1.0	200.0	0	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 14, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012965
Pace Project No.: 30127209

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012965

Pace Project No.: 30127209

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125579018	22-75-059-Q3	Water	07/16/14 08:55	07/23/14 09:05
30125579019	99-09-059-Q3	Water	07/16/14 09:05	07/23/14 09:05
30125579020	22-30-059-Q3	Water	07/16/14 09:36	07/23/14 09:05
30125579021	34-38-059-Q3	Water	07/16/14 10:29	07/23/14 09:05
30125579022	34-50-059-Q3b	Water	07/16/14 16:35	07/23/14 09:05
30125579023	99-17-059-Q3b	Water	07/16/14 16:45	07/23/14 09:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012965
Pace Project No.: 30127209

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125579018	22-75-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012965

Pace Project No.: 30127209

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 14, 2014

General Information:

1 sample was analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012965
Pace Project No.: 30127209

Sample: 22-75-059-Q3 **Lab ID: 30125579018** Collected: 07/16/14 08:55 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	5.59 ± 2.25 (3.00) C:NA T:NA	pCi/L	07/30/14 15:41	12587-46-1	
Gross Beta	EPA 900.0	3.04 ± 0.817 (4.00) C:NA T:NA	pCi/L	07/30/14 15:41	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012965
Pace Project No.: 30127209

QC Batch: RADC/20652 Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0 Analysis Description: 900.0 Gross Alpha/Beta
Associated Lab Samples: 30125579018, 30125579019

METHOD BLANK: 763861 Matrix: Water
Associated Lab Samples: 30125579018, 30125579019

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.126 ± 0.580 (1.49) C:NA T:NA	pCi/L	07/28/14 07:29	
Gross Beta	-0.132 ± 0.700 (1.78) C:NA T:NA	pCi/L	07/28/14 07:29	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012965
Pace Project No.: 30127209

QC Batch:	RADC/20653	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30125579020, 30125579021, 30125579022, 30125579023		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD



ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

QC Level: Level IV **30127209**
~~30125579~~
 Field Sampler: Signed **J [Signature]**
 8/14/14
 17-Jul-14

Subcontractor: Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601
 TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012965-001D / 22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	320ZP	1		018
N012965-002D / 99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	320ZP	1		019
N012965-003D / 22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	320ZP	1		020
N012965-004E / 34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	320ZP	1		021
N012965-005E / 34-50-059-Q3	Groundwater	7/16/2014 4:35:00 PM	320ZP	1		022
N012965-006E / 99-17-059-Q3	Groundwater	7/16/2014 4:45:00 PM	320ZP	1		023

FedEx#: 7706 3199 4558
 7706 3199 4812
 7706 3199 4466

General Comments: Please email sample receipt acknowledgement to the PM.
 Please use PO#:N012965 For questions, call Marion at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.
 Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: Alcotas	Date/Time: 7/17/2014
Relinquished by:	Date/Time:
Received by: Alma R. Muchoney	Date/Time: 7/23/14
Received by:	Date/Time: 0905



Sample Condition Upon Receipt

30127209
30125579

Client Name: ATL

Project #

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 7701031994028

Joe
8/14/14
Joe

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap ___ Bubble Bags ___ None ___ Other Styrofoam

Thermometer Used N/A Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Date and Initials of person examining contents: ARM 7/23/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>PHC2</u>
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>ARM</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

Joe

Date:

7/23/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

30127209
 30125579

page 2



Project Number: 30125579
 Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other	
018	NT																								
023	NT																								

4/14/14
 SP

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/31/2014
Worklist: 20652
Matrix: Water

Method: EPA 900.0
SOP: FGH-R-001
MB Sample ID: 763861



Method Blank Assessment		Sample Matrix Spike Control Assessment				
Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	0.1260	0.5800	1.4900	0.45100		
Gross Beta	-0.1320	0.7000	1.7800	0.60300		

Laboratory Control Sample Assessment		Sample Matrix Spike Control Assessment	
Analyte:	Count Date:	Gross Alpha	Gross Beta
Count Date:	7/28/14 7:29	7/28/14 7:29	7/28/14 7:29
Spike ID.:	13-048GA	13-047GB	13-047GB
Spike Concentration (pCi/L):	64.598	84.588	84.568
Volume Used (mL):	0.050	0.050	0.050
Aliquot Volume (L, g, F):	0.200	0.200	0.200
Target Conc. (pCi/L, g, F):	16.146	21.142	21.033
1.96 Sigma Uncertainty (Calculated):	0.570	1.285	1.278
Result (pCi/L, g, F):	13.219	14.555	20.831
1.96 Sigma Unc:	3.346	3.591	4.910
% Recovery:	81.87%	90.49%	99.04%
Assessment:	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	79.00%	79.00%

Duplicate Sample Assessment		Sample Matrix Spike Control Assessment	
LCS/LCSD Y or N?	Y	Y	Y
Analyte:	Gross Alpha	Gross Beta	Gross Beta
Sample I.D.:	LCS20652	LCS20652	LCS20652
Duplicate Sample I.D.:	LCS20652	LCS20652	LCS20652
Sample Result (pCi/L, g, F):	13.2190	23.7530	23.7530
1.96 Sigma Unc:	3.3460	4.9100	4.9100
Sample Duplicate Result (pCi/L, g, F):	14.5350	20.8310	20.8310
Duplicate Sample 1.96 Sigma Unc:	3.5910	4.3910	4.3910
Either results below MDC:	NO	NO	NO
Relative Percent Difference:	9.48%	13.11%	13.11%
Assessment:	Pass	Pass	Pass
% RPD Limit:	34.00%	29.00%	29.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

→ 2 No Limit 55-1350
08/12/14

08/12/14

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/31/2014
Worklist: 20653
Matrix: Water
Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 763864



Sample Matrix Spike Control Assessment		Gross Alpha	Gross Beta
Sample Collection Date	7/16/2014	30125579021	7/16/2014
Sample MS I.D.	30125579021MS	30125579021MS	30125579021MS
Sample MSD I.D.	13-047GB	13-047GB	13-047GB
MS/MSD Decay Corrected Spike Conc. (pCi/L)	64.588	64.588	64.588
Spike Volume Used in MS (mL)	0.10	0.10	0.10
Spike Volume Used in MSD (mL)	0.1999	0.1999	0.1999
MS Target Conc. (pCi/L, g, F)	32.323	32.323	42.360
MSD Aliquot (L, g, F)	1.140	1.140	2.574
MS Spike uncertainty (calculated)	1.319	1.319	3.121
MSD Spike uncertainty (calculated)	1.283	1.283	1.247
Sample 1.96 Sigma Unc.	13.866	13.866	28.397
Sample Matrix Spike Result	4.047	4.047	5.754
Sample MS 1.96 Sigma Unc.	59.67%	59.67%	59.67%
Sample Matrix Spike Duplicate Result	38.82%	38.82%	38.82%
Sample MSD 1.96 Sigma Unc.	Fail***	Fail***	Fail***
MS % Recovery	121.00%	121.00%	130.00%
MSD % Recovery	69.00%	69.00%	79.00%
MS Assessment	Pass	Pass	Pass
MSD Assessment	Pass	Pass	Pass
MS/MSD Upper % Recovery Limits	130.00%	130.00%	130.00%
MS/MSD Lower % Recovery Limits	79.00%	79.00%	79.00%
Matrix Spiker/Matrix Spike Duplicate Sample Assessment			

Method Blank Assessment			
Analyte	Activity	MDC	Critical Value
Gross Alpha	-0.2800	1.8260	0.56900
Gross Beta	0.5630	1.8460	0.62600

Laboratory Control Sample Assessment					
Analyte	Count Date	Gross Alpha		Gross Beta	
		LCS	LCS	LCS	LCS
1.96 Sig Unc.	7/28/14 9:01	7/28/14 9:01	7/28/14 9:01	7/28/14 9:01	7/28/14 9:01
Spike ID:	13-048GA	13-048GA	13-047GB	13-047GB	13-047GB
Spike Concentration (pCi/L)	64.588	64.588	84.588	84.588	84.588
Volume Used (mL)	0.050	0.050	0.050	0.050	0.050
Aliquot Volume (L, g, F)	0.200	0.200	0.200	0.200	0.200
Target Conc. (pCi/L, g, F)	16.144	16.028	21.140	20.987	20.987
1.96 Sigma Uncertainty (Calculated)	0.570	0.565	1.284	1.275	1.275
Result (pCi/L, g, F)	13.476	14.432	20.329	19.001	19.001
1.96 Sigma Unc	3.472	3.606	4.338	4.096	4.096
% Recovery	83.47%	90.04%	96.17%	90.54%	90.54%
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	121.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%
Duplicate Sample Assessment					

LCS/LCSD Y or N?		Y		Y	
Analyte	Gross Alpha	Gross Beta	LCS	LCS	LCS
Sample I.D.	LCS20653	LCS20653	LCS20653	LCS20653	LCS20653
Duplicate Sample I.D.	LCS20653	LCS20653	LCS20653	LCS20653	LCS20653
Sample Result (pCi/L, g, F)	13.4760	13.4760	4.3380	4.3380	4.3380
1.96 Sigma Unc	3.4720	3.4720	4.0960	4.0960	4.0960
Sample Duplicate Result (pCi/L, g, F)	14.4320	14.4320	19.0010	19.0010	19.0010
Duplicate Sample 1.96 Sigma Unc	3.6060	3.6060	4.0960	4.0960	4.0960
Either results below MDC?	NO	NO	NO	NO	NO
Relative Percent Difference	6.85%	6.75%	Pass	Pass	Pass
Assessment	Pass	Pass	Pass	Pass	Pass
% RPD Limit	34.00%	29.00%	29.00%	29.00%	29.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

g. November enter into Epic 08/12/14

08/12/14

July 30, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012966

RE: PGE Hinkley, 492581.UR.AU.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 16, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012966

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 30-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012966
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012966-001A	C-01-059-Q3	Water	7/16/2014 12:26:00 PM	7/16/2014	7/30/2014
N012966-001B	C-01-059-Q3	Water	7/16/2014 12:26:00 PM	7/16/2014	7/30/2014
N012966-001C	C-01-059-Q3	Water	7/16/2014 12:26:00 PM	7/16/2014	7/30/2014
N012966-001D	C-01-059-Q3	Water	7/16/2014 12:26:00 PM	7/16/2014	7/30/2014
N012966-001E	C-01-059-Q3	Water	7/16/2014 12:26:00 PM	7/16/2014	7/30/2014
N012966-002A	C-02-059-Q3	Water	7/16/2014 11:19:00 AM	7/16/2014	7/30/2014
N012966-002B	C-02-059-Q3	Water	7/16/2014 11:19:00 AM	7/16/2014	7/30/2014
N012966-002C	C-02-059-Q3	Water	7/16/2014 11:19:00 AM	7/16/2014	7/30/2014
N012966-002D	C-02-059-Q3	Water	7/16/2014 11:19:00 AM	7/16/2014	7/30/2014
N012966-002E	C-02-059-Q3	Water	7/16/2014 11:19:00 AM	7/16/2014	7/30/2014
N012966-003A	C-03-059-Q3	Water	7/16/2014 11:35:00 AM	7/16/2014	7/30/2014
N012966-003B	C-03-059-Q3	Water	7/16/2014 11:35:00 AM	7/16/2014	7/30/2014
N012966-003C	C-03-059-Q3	Water	7/16/2014 11:35:00 AM	7/16/2014	7/30/2014
N012966-003D	C-03-059-Q3	Water	7/16/2014 11:35:00 AM	7/16/2014	7/30/2014
N012966-003E	C-03-059-Q3	Water	7/16/2014 11:35:00 AM	7/16/2014	7/30/2014
N012966-004A	C-04-059-Q3	Water	7/16/2014 10:57:00 AM	7/16/2014	7/30/2014
N012966-004B	C-04-059-Q3	Water	7/16/2014 10:57:00 AM	7/16/2014	7/30/2014
N012966-004C	C-04-059-Q3	Water	7/16/2014 10:57:00 AM	7/16/2014	7/30/2014
N012966-004D	C-04-059-Q3	Water	7/16/2014 10:57:00 AM	7/16/2014	7/30/2014
N012966-004E	C-04-059-Q3	Water	7/16/2014 10:57:00 AM	7/16/2014	7/30/2014
N012966-005A	MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	7/16/2014	7/30/2014
N012966-005B	MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	7/16/2014	7/30/2014
N012966-005C	MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	7/16/2014	7/30/2014
N012966-005D	MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	7/16/2014	7/30/2014
N012966-005E	MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	7/16/2014	7/30/2014
N012966-006A	CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	7/16/2014	7/30/2014
N012966-006B	CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	7/16/2014	7/30/2014
N012966-006C	CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	7/16/2014	7/30/2014
N012966-006D	CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	7/16/2014	7/30/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012966
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012966-006E	CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	7/16/2014	7/30/2014
N012966-007A	DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	7/16/2014	7/30/2014
N012966-007B	DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	7/16/2014	7/30/2014
N012966-007C	DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	7/16/2014	7/30/2014
N012966-007D	DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	7/16/2014	7/30/2014
N012966-007E	DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	7/16/2014	7/30/2014
N012966-008A	EX-01-059-Q3	Water	7/16/2014 9:53:00 AM	7/16/2014	7/30/2014
N012966-008B	EX-01-059-Q3	Water	7/16/2014 9:53:00 AM	7/16/2014	7/30/2014
N012966-008C	EX-01-059-Q3	Water	7/16/2014 9:53:00 AM	7/16/2014	7/30/2014
N012966-009A	EX-02-059-Q3	Water	7/16/2014 10:06:00 AM	7/16/2014	7/30/2014
N012966-009B	EX-02-059-Q3	Water	7/16/2014 10:06:00 AM	7/16/2014	7/30/2014
N012966-009C	EX-02-059-Q3	Water	7/16/2014 10:06:00 AM	7/16/2014	7/30/2014
N012966-010A	EX-03-059-Q3	Water	7/16/2014 10:19:00 AM	7/16/2014	7/30/2014
N012966-010B	EX-03-059-Q3	Water	7/16/2014 10:19:00 AM	7/16/2014	7/30/2014
N012966-010C	EX-03-059-Q3	Water	7/16/2014 10:19:00 AM	7/16/2014	7/30/2014
N012966-011A	MW-952-059-Q3	Water	7/16/2014 10:29:00 AM	7/16/2014	7/30/2014
N012966-011B	MW-952-059-Q3	Water	7/16/2014 10:29:00 AM	7/16/2014	7/30/2014
N012966-011C	MW-952-059-Q3	Water	7/16/2014 10:29:00 AM	7/16/2014	7/30/2014
N012966-012A	EX-04-059-Q3	Water	7/16/2014 7:59:00 AM	7/16/2014	7/30/2014
N012966-012B	EX-04-059-Q3	Water	7/16/2014 7:59:00 AM	7/16/2014	7/30/2014
N012966-012C	EX-04-059-Q3	Water	7/16/2014 7:59:00 AM	7/16/2014	7/30/2014
N012966-013A	EX-23-059-Q3	Water	7/16/2014 9:14:00 AM	7/16/2014	7/30/2014
N012966-013B	EX-23-059-Q3	Water	7/16/2014 9:14:00 AM	7/16/2014	7/30/2014
N012966-013C	EX-23-059-Q3	Water	7/16/2014 9:14:00 AM	7/16/2014	7/30/2014
N012966-014A	EX-24-059-Q3	Water	7/16/2014 8:42:00 AM	7/16/2014	7/30/2014
N012966-014B	EX-24-059-Q3	Water	7/16/2014 8:42:00 AM	7/16/2014	7/30/2014
N012966-014C	EX-24-059-Q3	Water	7/16/2014 8:42:00 AM	7/16/2014	7/30/2014
N012966-015A	EX-25-059-Q3	Water	7/16/2014 1:09:00 PM	7/16/2014	7/30/2014
N012966-015B	EX-25-059-Q3	Water	7/16/2014 1:09:00 PM	7/16/2014	7/30/2014
N012966-015C	EX-25-059-Q3	Water	7/16/2014 1:09:00 PM	7/16/2014	7/30/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012966
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012966-016A	EX-26-059-Q3	Water	7/16/2014 8:21:00 AM	7/16/2014	7/30/2014
N012966-016B	EX-26-059-Q3	Water	7/16/2014 8:21:00 AM	7/16/2014	7/30/2014
N012966-016C	EX-26-059-Q3	Water	7/16/2014 8:21:00 AM	7/16/2014	7/30/2014
N012966-017A	EX-28-059-Q3	Water	7/16/2014 8:54:00 AM	7/16/2014	7/30/2014
N012966-017B	EX-28-059-Q3	Water	7/16/2014 8:54:00 AM	7/16/2014	7/30/2014
N012966-017C	EX-28-059-Q3	Water	7/16/2014 8:54:00 AM	7/16/2014	7/30/2014



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 12:26:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-02-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:19:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1900	17	17	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-03-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:35:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3500	29	29	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-04-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:57:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	960	10	10	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-005

Client Sample ID: MW-951-059-Q3
Collection Date: 7/16/2014 11:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082				PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	950	10	10		mg/L	1	7/17/2014 08:18 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-006

Client Sample ID: CPVT-059-Q3
Collection Date: 7/16/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082				PrepDate: 7/17/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10		mg/L	1	7/17/2014 08:18 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: DVD-BS-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140717F	QC Batch: 46082			PrepDate	7/17/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2000	18	18	mg/L	1	7/17/2014 08:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46082	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: PBW	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807681						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46082	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: LCSW	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		926.000	10	1000	0	92.6	80	120			

Sample ID N012965-001C-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/17/2014	RunNo: 94190						
Client ID: ZZZZZ	Batch ID: 46082	TestNo: SM2540C		Analysis Date: 7/17/2014	SeqNo: 1807684						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		699.000	10					703.0	0.571	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 12:26:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	37	0.011	0.67	pCi/L	1	7/18/2014 07:44 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-02-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:19:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	38	0.011	0.67	pCi/L	1	7/18/2014 08:11 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-03-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:35:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	52	0.011	0.67	pCi/L	1	7/18/2014 08:17 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-04-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:57:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	33	0.011	0.67	pCi/L	1	7/18/2014 08:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-005

Client Sample ID: MW-951-059-Q3
Collection Date: 7/16/2014 11:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091				PrepDate	7/18/2014	Analyst: CEI
Uranium	32	0.011	0.67		pCi/L	1	7/18/2014 08:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: CPVT-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 12:47:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	35	0.011	0.67	pCi/L	1	7/18/2014 08:44 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: DVD-BS-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	60	0.011	0.67	pCi/L	1	7/18/2014 08:50 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 9:53:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091	PrepDate: 7/18/2014	Analyst: CEI
Uranium	54 0.011 0.67	pCi/L	1 7/18/2014 08:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-009

Client Sample ID: EX-02-059-Q3
Collection Date: 7/16/2014 10:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091				PrepDate: 7/18/2014		Analyst: CEI
Uranium	53	0.011	0.67		pCi/L	1	7/18/2014 09:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-03-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:19:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	83	0.011	0.67	pCi/L	1	7/18/2014 09:06 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-011

Client Sample ID: MW-952-059-Q3
Collection Date: 7/16/2014 10:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091				PrepDate	7/18/2014	Analyst: CEI
Uranium	85	0.011	0.67		pCi/L	1	7/18/2014 09:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-012

Client Sample ID: EX-04-059-Q3
Collection Date: 7/16/2014 7:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091				PrepDate	7/18/2014	Analyst: CEI
Uranium	120	0.011	0.67		pCi/L	1	7/18/2014 09:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-23-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 9:14:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091	PrepDate: 7/18/2014	Analyst: CEI
Uranium	110 0.011 0.67	pCi/L	1 7/18/2014 09:28 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-014

Client Sample ID: EX-24-059-Q3
Collection Date: 7/16/2014 8:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	110	0.011	0.67	pCi/L	1	7/18/2014 09:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-25-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 1:09:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091			PrepDate	7/18/2014	Analyst: CEI
Uranium	76	0.011	0.67	pCi/L	1	7/18/2014 09:50 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-016

Client Sample ID: EX-26-059-Q3
Collection Date: 7/16/2014 8:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091				PrepDate 7/18/2014		Analyst: CEI
Uranium	51	0.011	0.67		pCi/L	1	7/18/2014 09:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-28-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 8:54:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140718B	QC Batch: 46091	PrepDate: 7/18/2014	Analyst: CEI
Uranium	74 0.011 0.67	pCi/L	1 7/18/2014 10:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46091	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: PBW	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810221						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	ND	0.67									
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Sample ID LCS-46091	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: LCSW	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810222						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	6.867	0.67	6.700	0	102	85	115				
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Sample ID N012966-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810226						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	44.046	0.67	6.700	36.74	109	75	125				
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Sample ID N012966-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810227						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	45.397	0.67	6.700	36.74	129	75	125	44.05	3.02	20	S
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Sample ID N012966-011B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/18/2014	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8		Analysis Date: 7/18/2014	SeqNo: 1810240						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	87.507	0.67	6.700	84.92	38.6	75	125				S
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-001

Client Sample ID: C-01-059-Q3
Collection Date: 7/16/2014 12:26:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	7.0	0.016	0.20		µg/L	1	7/17/2014 06:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722B	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	6.4	0.030	1.0		µg/L	1	7/23/2014 01:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-002

Client Sample ID: C-02-059-Q3
Collection Date: 7/16/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717A	QC Batch: R94201				PrepDate		Analyst: RB
Hexavalent Chromium	8.1	0.016	0.20		µg/L	1	7/17/2014 07:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722B	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	7.6	0.030	1.0		µg/L	1	7/23/2014 02:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-003

Client Sample ID: C-03-059-Q3
Collection Date: 7/16/2014 11:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/17/2014 07:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722B	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/23/2014 02:15 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-004

Client Sample ID: C-04-059-Q3
Collection Date: 7/16/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	7.3	0.016	0.20		µg/L	1	7/17/2014 08:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	6.3	0.030	1.0		µg/L	1	7/23/2014 09:36 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-005

Client Sample ID: MW-951-059-Q3
Collection Date: 7/16/2014 11:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	7.3	0.016	0.20		µg/L	1	7/17/2014 09:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	6.5	0.030	1.0		µg/L	1	7/23/2014 09:38 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-006

Client Sample ID: CPVT-059-Q3
Collection Date: 7/16/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	7.2	0.016	0.20		µg/L	1	7/17/2014 10:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	6.3	0.030	1.0		µg/L	1	7/23/2014 09:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-007

Client Sample ID: DVD-BS-01-059-Q3
Collection Date: 7/16/2014 10:37:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	16	0.016	0.20		µg/L	1	7/17/2014 10:36 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	14	0.030	1.0		µg/L	1	7/23/2014 09:50 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-008

Client Sample ID: EX-01-059-Q3
Collection Date: 7/16/2014 9:53:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	8.9	0.016	0.20		µg/L	1	7/17/2014 10:56 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	8.2	0.030	1.0		µg/L	1	7/23/2014 09:55 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-009

Client Sample ID: EX-02-059-Q3
Collection Date: 7/16/2014 10:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	20	0.032	0.40		µg/L	2	7/18/2014 10:48 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	18	0.030	1.0		µg/L	1	7/23/2014 10:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-010

Client Sample ID: EX-03-059-Q3
Collection Date: 7/16/2014 10:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	4.9	0.016	0.20		µg/L	1	7/17/2014 11:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	4.2	0.030	1.0		µg/L	1	7/23/2014 10:06 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-011

Client Sample ID: MW-952-059-Q3
Collection Date: 7/16/2014 10:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	4.8	0.016	0.20		µg/L	1	7/18/2014 12:15 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	4.4	0.030	1.0		µg/L	1	7/23/2014 10:12 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-012

Client Sample ID: EX-04-059-Q3
Collection Date: 7/16/2014 7:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140717B	QC Batch: R94202				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/18/2014 12:35 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46090				PrepDate	7/18/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/23/2014 10:17 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-013

Client Sample ID: EX-23-059-Q3
Collection Date: 7/16/2014 9:14:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/18/2014 09:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-014

Client Sample ID: EX-24-059-Q3
Collection Date: 7/16/2014 8:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203				PrepDate		Analyst: RB
Hexavalent Chromium	1.0	0.016	0.20		µg/L	1	7/18/2014 10:04 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-015

Client Sample ID: EX-25-059-Q3
Collection Date: 7/16/2014 1:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203			PrepDate			Analyst: RB
Hexavalent Chromium	4.5	0.016	0.20		µg/L	1	7/18/2014 10:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL
Lab Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012966-016

Client Sample ID: EX-26-059-Q3
Collection Date: 7/16/2014 8:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203			PrepDate			Analyst: RB
Hexavalent Chromium	22	0.032	0.40		µg/L	2	7/18/2014 11:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: EX-28-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 8:54:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718A	QC Batch: R94203			PrepDate			Analyst: RB
Hexavalent Chromium	5.7	0.016	0.20		µg/L	1	7/18/2014 10:34 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94201	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201
Client ID: PBW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808249
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-R94201	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201
Client ID: LCSW	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808250
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	5.032	0.20	5.000	0	101 90 110

Sample ID N012952-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808252
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.038	0.20			0 0 20

Sample ID N012952-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808253
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	1.089	0.20	1.000	0	109 90 110

Sample ID N012952-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201
Client ID: ZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808254
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	1.089	0.20	1.000	0	109 90 110 1.089 0 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.724	0.20	5.000	5.736	99.7	90	110				

Sample ID N012952-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808258						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.831	0.20	5.000	2.782	101	90	110				

Sample ID N012952-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808262						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.864	0.20	5.000	2.825	101	90	110				

Sample ID N012952-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808264						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.116	0.20	1.000	0.06470	105	90	110				

Sample ID N012952-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808266						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.075	0.20	1.000	0	108	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0.06200	99.7	90	110				

Sample ID N012952-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0.05260	103	90	110				

Sample ID N012952-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808274						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.040	0.20	1.000	0.04010	100	90	110				

Sample ID N012952-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808276						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.098	0.20	1.000	0	110	90	110				

Sample ID N012952-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808278						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.067	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.071	0.20	1.000	0	107	90	110				

Sample ID N012952-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.022	0.20	5.000	1.935	102	90	110				

Sample ID N012952-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.861	0.20	1.000	1.864	99.7	90	110				

Sample ID N012952-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808288						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.514	0.20	1.000	0.4568	106	90	110				

Sample ID N012952-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808290						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.461	0.20	1.000	2.471	99.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012952-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.299	0.20	1.000	2.272	103	90	110				

Sample ID N012943-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808294						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.608	0.20	1.000	1.600	101	90	110				

Sample ID N012966-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808298						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.911	0.20	5.000	6.990	98.4	90	110				

Sample ID N012966-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94201						
Client ID: ZZZZZZ	Batch ID: R94201	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808300						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.191	0.20	5.000	8.127	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94202	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: PBW	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94202	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: LCSW	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.927	0.20	5.000	0	98.5	90	110				
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Sample ID N012966-003A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.899	0.20						2.893	0.224	20	
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Sample ID N012966-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.940	0.20	5.000	2.893	101	90	110				
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Sample ID N012966-003A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808316						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.858	0.20	5.000	2.893	99.3	90	110	7.940	1.05	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012966-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.309	0.20	5.000	7.330	99.6	90	110				

Sample ID N012966-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.300	0.20	5.000	7.322	99.6	90	110				

Sample ID N012966-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.231	0.20	5.000	7.231	100	90	110				

Sample ID N012966-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808326						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	21.393	0.20	5.000	16.21	104	90	110				

Sample ID N012966-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6		Analysis Date: 7/17/2014	SeqNo: 1808328						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.853	0.20	5.000	8.907	98.9	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012966-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6	Analysis Date: 7/18/2014	SeqNo: 1808332							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.980	0.20	5.000	4.891	102	90	110				

Sample ID N012966-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6	Analysis Date: 7/18/2014	SeqNo: 1808334							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.864	0.20	5.000	4.822	101	90	110				

Sample ID N012966-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94202						
Client ID: ZZZZZZ	Batch ID: R94202	TestNo: EPA 218.6	Analysis Date: 7/18/2014	SeqNo: 1808336							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.217	0.20	5.000	2.073	103	90	110				

Qualifiers:

- | | | |
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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012966-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808358						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.197	0.20	5.000	1.003	104	90	110
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Sample ID N012966-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.689	0.20	5.000	4.484	104	90	110
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Sample ID N012966-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.804	0.20	5.000	5.707	102	90	110
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Sample ID N012964-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.725	0.20	5.000	1.727	99.9	90	110
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Sample ID N012964-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.845	0.20	5.000	1.774	101	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012964-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.280	0.20	5.000	2.240	101	90	110				

Sample ID N012964-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID N012964-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.003	0.20	5.000	4.978	101	90	110				

Sample ID N012964-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94203						
Client ID: ZZZZZZ	Batch ID: R94203	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808374						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.070	0.20	1.000	0.05190	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46090	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94252						
Client ID: PBW	Batch ID: 46090	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1811868						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46090	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94252						
Client ID: LCSW	Batch ID: 46090	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1811871						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.532 1.0 10.00 0 95.3 85 115

Sample ID N012966-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94252						
Client ID: ZZZZZZ	Batch ID: 46090	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1811887						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 15.641 1.0 10.00 6.430 92.1 75 125

Sample ID N012966-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/18/2014	RunNo: 94252						
Client ID: ZZZZZZ	Batch ID: 46090	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1811889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 15.507 1.0 10.00 6.430 90.8 75 125 15.64 0.860 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 12:26:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171	PrepDate	Analyst: PS
Nitrate as N	11 0.051 0.50	mg/L	10 7/17/2014 02:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-02-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:19:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate		Analyst: PS
Nitrate as N	23	0.10	1.0	mg/L	20	7/17/2014 03:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-03-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 11:35:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate			Analyst: PS
Nitrate as N	45	0.10	1.0	mg/L	20		7/17/2014 03:46 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: C-04-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:57:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate			Analyst: PS
Nitrate as N	10	0.051	0.50	mg/L	10		7/17/2014 03:59 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** MW-951-059-Q3
Lab Order: N012966 **Collection Date:** 7/16/2014 11:07:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012966-005

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140717A** QC Batch: **R94171** PrepDate Analyst: **PS**
Nitrate as N 10 0.051 0.50 mg/L 10 7/17/2014 05:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** CPVT-059-Q3
Lab Order: N012966 **Collection Date:** 7/16/2014 12:47:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012966-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140717A** QC Batch: **R94171** PrepDate Analyst: **PS**
Nitrate as N 13 0.051 0.50 mg/L 10 7/17/2014 04:24 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 30-Jul-14

CLIENT: CH2M HILL	Client Sample ID: DVD-BS-01-059-Q3
Lab Order: N012966	Collection Date: 7/16/2014 10:37:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012966-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140717A	QC Batch: R94171			PrepDate			Analyst: PS
Nitrate as N	15	0.10	1.0	mg/L	20		7/17/2014 04:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94171_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94171			
Client ID:	PBW	Batch ID:	R94171	TestNo:	EPA 300.0			Analysis Date:	7/17/2014	SeqNo:	1807102			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID	LCS-R94171_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94171			
Client ID:	LCSW	Batch ID:	R94171	TestNo:	EPA 300.0			Analysis Date:	7/17/2014	SeqNo:	1807103			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.060 0.050 1.000 0 106 90 110

Sample ID	N012969-001A-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94171			
Client ID:	ZZZZZ	Batch ID:	R94171	TestNo:	EPA 300.0			Analysis Date:	7/17/2014	SeqNo:	1807106			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.374 0.050 0.3470 7.49 20

Sample ID	N012969-001A-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94171			
Client ID:	ZZZZZ	Batch ID:	R94171	TestNo:	EPA 300.0			Analysis Date:	7/17/2014	SeqNo:	1807107			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.350 0.050 1.000 0.3470 100 80 120

Sample ID	N012969-001A-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94171			
Client ID:	ZZZZZ	Batch ID:	R94171	TestNo:	EPA 300.0			Analysis Date:	7/17/2014	SeqNo:	1807110			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.374 0.050 1.000 0.3470 103 80 120 1.350 1.76 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012965-001B-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807111						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	3.470	0.25						3.665	5.47	20	

Sample ID N012965-001B-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94171						
Client ID: ZZZZZZ	Batch ID: R94171	TestNo: EPA 300.0		Analysis Date: 7/17/2014	SeqNo: 1807112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.580	0.25	5.000	3.665	98.3	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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SAMPLE ID	DATE	TIME	Matrix	Container:						Number of Containers	COMMENTS		
				250 ml Poly (NH4)2, SO4, NH4, OH, 4°C	500 ml Poly HNO3, 4°C	500 ml Poly HNO3, 4°C	1000ml Poly 4°C	1000ml Poly 4°C	2x1000 ml Poly HNO3				
Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.AU.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Preservatives:	Filtered:	Holding Time (days):							
				Field	Field	Field	Field	NA	NA				
				28	180	180	2	7	180				
				Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	Gross Alpha/Beta (SM710B/E900)				
C-01-059-Q3	7/16/2014	1226	Water	X	X	X	X	X	X	NO12966-1		6	JM
C-02-059-Q3	7/16/2014	1119	Water	X	X	X	X	X	X	-2	6	JM	
C-03-059-Q3	7/16/2014	1135	Water	X	X	X	X	X	X	-3	6	JM	
C-04-059-Q3	7/16/2014	1057	Water	X	X	X	X	X	X	-4	6	JM	
MW-951-059-Q3	7/16/2014	1107	Water	X	X	X	X	X	X	-5	6	JM	
CPVT-059-Q3	7/16/2014	1247	Water	X	X	X	X	X	X	-6	6	JM	
DVD-BS-01-059-Q3	7/16/2014	1037	Water	X	X	X	X	X	X	-7	6	JM	
MW-701-059-Q3	7/16/2014		Water	X							4		
EX-01-059-Q3	7/16/2014	0953	Water	X	X	X			X	-8	4	JM	
EX-02-059-Q3	7/16/2014	1006	Water	X	X	X			X	-9	4	JM	
EX-03-059-Q3	7/16/2014	1019	Water	X	X	X			X	-10	4	JM	
MW-952-059-Q3	7/16/2014	1029	Water	X	X	X			X	-11	4	JM	
EX-04-059-Q3	7/16/2014	0759	Water	X	X	X			X	-12	4	JM	
EX-23-059-Q3	7/16/2014	0914	Water	X		X			X	-13	4	JM	
EX-24-059-Q3	7/16/2014	0842	Water	X		X			X	-14	4	JM	
EX-25-059-Q3	7/16/2014	1309	Water	X		X			X	✓ -15	4	JM	

Approved by <i>K. Blaine</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/16/14 1700 7/16/14 1700 7/16/14 1700 7/16/14 1700 7/16/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2, 92 / 5.6°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.


Cooler Received/Opened On: 7/16/2014 Workorder: N012966
 Rep sample Temp (Deg C): 2.9/3.6/2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/17/2014

Reviewed By:

 07/21/14



ASSET Laboratories

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www.asset-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

17-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012966-001E / C-01-059-Q3	Water	7/16/2014 12:26:00 PM	32OZP	1		
N012966-002E / C-02-059-Q3	Water	7/16/2014 11:19:00 AM	32OZP	1		
N012966-003E / C-03-059-Q3	Water	7/16/2014 11:35:00 AM	32OZP	1		
N012966-004E / C-04-059-Q3	Water	7/16/2014 10:57:00 AM	32OZP	1		
N012966-005E / MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	32OZP	1		
N012966-006E / CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	32OZP	1		
N012966-007E / DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	32OZP	1		
N012966-008C / EX-01-059-Q3	Water	7/16/2014 9:53:00 AM	32OZP	1		
N012966-009C / EX-02-059-Q3	Water	7/16/2014 10:06:00 AM	32OZP	1		
N012966-010C / EX-03-059-Q3	Water	7/16/2014 10:19:00 AM	32OZP	1		
N012966-011C / MW-952-059-Q3	Water	7/16/2014 10:29:00 AM	32OZP	1		
N012966-012C / EX-04-059-Q3	Water	7/16/2014 7:59:00 AM	32OZP	1		
N012966-013C / EX-23-059-Q3	Water	7/16/2014 9:14:00 AM	32OZP	1		
N012966-014C / EX-24-059-Q3	Water	7/16/2014 8:42:00 AM	32OZP	1		
N012966-015C / EX-25-059-Q3	Water	7/16/2014 1:09:00 PM	32OZP	1		
N012966-016C / EX-26-059-Q3	Water	7/16/2014 8:21:00 AM	32OZP	1		
N012966-017C / EX-28-059-Q3	Water	7/16/2014 8:54:00 AM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012966 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#s: 7706 3199 4558
7706 3199 4812
7706 3199 4466

	Date/Time		Date/Time
Relinquished by: <u>Al Cortes</u> 7/17/2014	1700	Received by: _____	
Relinquished by: _____		Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012966-001D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.8985-60.7714)*1000000}{100}$$

1271 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1300 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/17/2014								TDS/CONDUCTIVITY
Date Finished: 7/18/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46082	100	60.6703	60.6704	1	1	1.00		
LCS-46082	100	62.4455	62.5381	926	1	926.00		
N012965-001C	100	60.3111	60.3814	703	1	703.00	1033	0.68
N012965-001C-DUP	100	60.3417	60.4116	699	1	699.00	1033	0.68
N012965-002C	100	60.5339	60.6034	695	1	695.00	1045	0.67
N012965-003C	100	61.1342	61.1808	466	1	466.00	784	0.59
N012965-004C	100	60.4426	60.4698	272	1	272.00	398	0.68
N012965-005C	100	61.3124	61.3432	308	1	308.00	507	0.61
N012965-006C	100	61.1205	61.1536	331	1	331.00	493	0.67
N012966-001D	100	60.7714	60.8985	1271	1	1271.00	1707	0.74
N012966-002D	60	59.9072	60.0203	1131	1.6666667	1885.00	2370	0.80
N012966-003D	35 65	61.6765	61.8006	1241	1.5384615 2.857	3545.71 1909.23	4930 3930	0.72 0.49
N012966-004D	100	59.9007	59.9968	961	1	961.00	1328	0.72
N012966-005D	100	61.2156	61.3105	949	1	949.00	1320	0.72
N012966-006D	100	60.8342	60.9516	1174	1	1174.00	1605	0.73
N012966-007D	55	59.6096	59.7205	1109	1.8181818	2016.36	2620	0.77

me
7/18/2014

Nancy
for
7/30/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012966-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 54.8317059656814 * 1 * (25/25) * 0.67 \\ &= 36.7372429970065 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 37$$



7/30/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012966
Test Method: EPA 200.8
Analysis Date: 7/18/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46091

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012966-001B-DT 5X	Uranium	pCi/L	36.36967474	PASS	36.737243	1.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012966-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94225						
Client ID: ZZZZZ	Batch ID: 46091	TestNo: EPA 200.8	Analysis Date: 7/18/2014	SeqNo: 1810225							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	51.903	1.3	13.40	36.74	113	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012966-004A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 7.3305 * 1 \\ &= 7.3305\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 7.3$$

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012966-003C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 2.23 * 20 \\ &= 44.6 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 45$$

 7/30/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012966-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 7.5783441217 * 1 * (25/25) \\ &= 7.5783441217 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 7.6$$



7/30/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012966
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46090

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012966-001B-DT 5X	Chromium	µg/L	6.722508022	NA	6.430497269	4.54%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012966
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012966-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94252						
Client ID: ZZZZZ	Batch ID: 46090	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1811885							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	24.707	2.0	20.00	6.430	91.4	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 14, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012966
Pace Project No.: 30125579

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report reissued 8/15/14 to reflect the moving of 6 samples to WO 30127209 as per client.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

SAMPLE SUMMARY

Project: N012966

Pace Project No.: 30125579

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125579001	N012966-001E/C-01-059-Q3	Water	07/16/14 12:26	07/23/14 09:05
30125579002	N012966-002E/C-02-059-Q3	Water	07/16/14 11:19	07/23/14 09:05
30125579003	N012966-003E/C-03-059-Q3	Water	07/16/14 11:35	07/23/14 09:05
30125579004	N012966-004E/C-04-059-Q3	Water	07/16/14 10:57	07/23/14 09:05
30125579005	N0126966-005E/MW-951-059-Q3	Water	07/16/14 11:07	07/23/14 09:05
30125579006	N012966-006E/CPVT-059-Q3	Water	07/16/14 12:47	07/23/14 09:05
30125579007	N01212966-007E/DVD-BS-01-059-Q	Water	07/16/14 10:37	07/23/14 09:05
30125579008	N012966-008C/EX-01-059-Q3	Water	07/16/14 09:53	07/23/14 09:05
30125579009	N012966-009C/EX-02-059-Q3	Water	07/16/14 10:06	07/23/14 09:05
30125579010	N012966-010C/EX-03-059-Q3	Water	07/16/14 10:19	07/23/14 09:05
30125579011	N012966-011C/MW-952-059-Q3	Water	07/16/14 10:29	07/23/14 09:05
30125579012	N012966-012C/EX-04-059-Q3	Water	07/16/14 07:59	07/23/14 09:05
30125579013	N012966-013C/EX-23-059-Q3	Water	07/16/14 09:14	07/23/14 09:05
30125579014	N012966-014C/EX-24-059-Q3	Water	07/16/14 08:42	07/23/14 09:05
30125579015	N012966-015C/EX-25-059-Q3	Water	07/16/14 13:09	07/23/14 09:05
30125579016	N012966-016C/EX-26-059-Q3	Water	07/16/14 08:21	07/23/14 09:05
30125579017	N012966-017C/EX-28-059-Q3	Water	07/16/14 08:54	07/23/14 09:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012966
Pace Project No.: 30125579

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125579001	N012966-001E/C-01-059-Q3	EPA 900.0	FCC	2
30125579002	N012966-002E/C-02-059-Q3	EPA 900.0	FCC	2
30125579003	N012966-003E/C-03-059-Q3	EPA 900.0	FCC	2
30125579004	N012966-004E/C-04-059-Q3	EPA 900.0	FCC	2
30125579005	N0126966-005E/MW-951-059-Q3	EPA 900.0	FCC	2
30125579006	N012966-006E/CPVT-059-Q3	EPA 900.0	FCC	2
30125579007	N01212966-007E/DVD-BS-01-059-Q	EPA 900.0	FCC	2
30125579008	N012966-008C/EX-01-059-Q3	EPA 900.0	FCC	2
30125579009	N012966-009C/EX-02-059-Q3	EPA 900.0	FCC	2
30125579010	N012966-010C/EX-03-059-Q3	EPA 900.0	FCC	2
30125579011	N012966-011C/MW-952-059-Q3	EPA 900.0	FCC	2
30125579012	N012966-012C/EX-04-059-Q3	EPA 900.0	FCC	2
30125579013	N012966-013C/EX-23-059-Q3	EPA 900.0	FCC	2
30125579014	N012966-014C/EX-24-059-Q3	EPA 900.0	FCC	2
30125579015	N012966-015C/EX-25-059-Q3	EPA 900.0	FCC	2
30125579016	N012966-016C/EX-26-059-Q3	EPA 900.0	FCC	2
30125579017	N012966-017C/EX-28-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012966

Pace Project No.: 30125579

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 14, 2014

General Information:

17 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012966
Pace Project No.: 30125579

Sample: N012966-001E/C-01-059-Q3 **Lab ID: 30125579001** Collected: 07/16/14 12:26 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	40.4 ± 9.85 (8.53) C:NA T:NA	pCi/L	07/30/14 20:26	12587-46-1	
Gross Beta	EPA 900.0	5.82 ± 2.08 (4.00) C:NA T:NA	pCi/L	07/30/14 20:26	12587-47-2	

Sample: N012966-002E/C-02-059-Q3 **Lab ID: 30125579002** Collected: 07/16/14 11:19 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	51.4 ± 12.0 (7.39) C:NA T:NA	pCi/L	07/30/14 20:26	12587-46-1	
Gross Beta	EPA 900.0	4.48 ± 2.65 (4.00) C:NA T:NA	pCi/L	07/30/14 20:26	12587-47-2	

Sample: N012966-003E/C-03-059-Q3 **Lab ID: 30125579003** Collected: 07/16/14 11:35 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	43.4 ± 9.05 (3.00) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	7.17 ± 1.84 (4.00) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N012966-004E/C-04-059-Q3 **Lab ID: 30125579004** Collected: 07/16/14 10:57 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	66.1 ± 16.9 (14.5) C:NA T:NA	pCi/L	07/30/14 20:26	12587-46-1	
Gross Beta	EPA 900.0	5.49 ± 3.88 (6.27) C:NA T:NA	pCi/L	07/30/14 20:26	12587-47-2	

Sample: N012966-005E/MW-951-059-Q3 **Lab ID: 30125579005** Collected: 07/16/14 11:07 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	45.1 ± 9.30 (3.00) C:NA T:NA	pCi/L	07/30/14 20:26	12587-46-1	
Gross Beta	EPA 900.0	4.98 ± 1.62 (4.00) C:NA T:NA	pCi/L	07/30/14 20:26	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012966
Pace Project No.: 30125579

Sample: N012966-006E/CPVT-059-Q3 **Lab ID: 30125579006** Collected: 07/16/14 12:47 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	41.0 ± 9.32 (5.59) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	4.84 ± 2.08 (4.00) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N01212966-007E/DVD-BS-01-059-Q **Lab ID: 30125579007** Collected: 07/16/14 10:37 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	71.1 ± 16.7 (12.5) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	11.3 ± 3.53 (4.26) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N012966-008C/EX-01-059-Q3 **Lab ID: 30125579008** Collected: 07/16/14 09:53 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	76.6 ± 16.0 (6.83) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	8.61 ± 2.55 (4.00) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N012966-009C/EX-02-059-Q3 **Lab ID: 30125579009** Collected: 07/16/14 10:06 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	74.9 ± 16.5 (9.03) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	4.19 ± 2.65 (4.00) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N012966-010C/EX-03-059-Q3 **Lab ID: 30125579010** Collected: 07/16/14 10:19 Received: 07/23/14 09:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	78.0 ± 18.1 (10.7) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	9.28 ± 4.14 (5.93) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.all-labs.com
 TEL: 7023072659 FAX: 7023072691



QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct#:

Field Sampler: SIGNED

30125579

17-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests
N012966-001E / C-01-059-Q3	Water	7/16/2014 12:26:00 PM	32OZP	1	001
N012966-002E / C-02-059-Q3	Water	7/16/2014 11:19:00 AM	32OZP	1	002
N012966-003E / C-03-059-Q3	Water	7/16/2014 11:35:00 AM	32OZP	1	003
N012966-004E / C-04-059-Q3	Water	7/16/2014 10:57:00 AM	32OZP	1	004
N012966-005E / MW-951-059-Q3	Water	7/16/2014 11:07:00 AM	32OZP	1	005
N012966-006E / CPVT-059-Q3	Water	7/16/2014 12:47:00 PM	32OZP	1	006
N012966-007E / DVD-BS-01-059-Q3	Water	7/16/2014 10:37:00 AM	32OZP	1	007
N012966-008C / EX-01-059-Q3	Water	7/16/2014 9:53:00 AM	32OZP	1	008
N012966-009C / EX-02-059-Q3	Water	7/16/2014 10:06:00 AM	32OZP	1	009
N012966-010C / EX-03-059-Q3	Water	7/16/2014 10:19:00 AM	32OZP	1	010
N012966-011C / MW-952-059-Q3	Water	7/16/2014 10:29:00 AM	32OZP	1	011
N012966-012C / EX-04-059-Q3	Water	7/16/2014 7:59:00 AM	32OZP	1	012
N012966-013C / EX-23-059-Q3	Water	7/16/2014 9:14:00 AM	32OZP	1	013
N012966-014C / EX-24-059-Q3	Water	7/16/2014 8:42:00 AM	32OZP	1	014
N012966-015C / EX-25-059-Q3	Water	7/16/2014 1:09:00 PM	32OZP	1	015
N012966-016C / EX-26-059-Q3	Water	7/16/2014 8:21:00 AM	32OZP	1	016
N012966-017C / EX-28-059-Q3	Water	7/16/2014 8:54:00 AM	32OZP	1	017

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO# N012966 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#s: 7706 3199 4558
 7706 3199 4812
 7706 3199 4466

Relinquished by: <u>Alton</u>	Date/Time: <u>7/17/2014</u>
Relinquished by: <u>Alton</u>	Date/Time: <u>1700</u>
Received by: <u>Alton Muchoney</u>	Date/Time: <u>7/23/14</u>
Received by: <u>Alton</u>	Date/Time: <u>0905</u>



ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
www.assetlabs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV **30125579**

Subcontractor: Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601
 TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #: 17-Jul-14

Field Sampler: Signed

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012965-001D / 22-75-059-Q3	Groundwater	7/16/2014 8:55:00 AM	320ZP	1		ORR
N012965-002D / 99-09-059-Q3	Groundwater	7/16/2014 9:05:00 AM	320ZP	1		ORR
N012965-003D / 22-30-059-Q3	Groundwater	7/16/2014 9:36:00 AM	320ZP	1		ORR
N012965-004E / 34-38-059-Q3	Groundwater	7/16/2014 10:29:00 AM	320ZP	1		ORR
N012965-005E / 34-50-059-Q3	Groundwater	7/16/2014 4:35:00 PM	320ZP	1		ORR
N012965-006E / 99-17-059-Q3	Groundwater	7/16/2014 4:45:00 PM	320ZP	1		ORR

FedEx#s: 7706 3199 4558
 7706 3199 4812
 7706 3199 4466

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012965 For questions, call Marion at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Scott</i>	Date/Time: 7/17/2014
Relinquished by: <i>Alma R. Muchoney</i>	Date/Time: 7/23/14
Received by: <i>Alma R. Muchoney</i>	Date/Time: 0905



Sample Condition Upon Receipt

Client Name: ATL

Project # 30125579

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 7701031994008

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other Styrofoam

Thermometer Used _____ NIA Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NIA °C Correction Factor: NIA °C Final Temp: NIA °C

Date and Initials of person examining contents: ARM 7/23/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>PH<2</u>
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>ARM</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review:

Date:

7/23/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number:

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil Kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 galL)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other	
100	1M																								
023	1M																								

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 7/31/2014
Worklist: 20652
Matrix: Water

Method: EPA 900.0
SOP: FGH-R-001
MB Sample ID: 763861



Sample Matrix Spike Control Assessment		Sample Matrix Spike Control Assessment	
Analyte:	Gross Alpha	Analyte:	Gross Beta
Sample Collection Date	7/16/2014	Sample Collection Date	7/16/2014
Sample I.D.	30125579018	Sample I.D.	30125579018
Sample MS I.D.	30125579018MS	Sample MS I.D.	30125579018MS
Sample MSD I.D.		Sample MSD I.D.	
Spike I.D.:	13-048GA	Spike I.D.:	13-047GB
MS/MSD Decay Corrected Spike Conc. (pCi/L)	64.598	MS/MSD Decay Corrected Spike Conc. (pCi/L)	84.657
Spike Volume Used in MS (mL)	0.10	Spike Volume Used in MS (mL)	0.10
Spike Volume Used in MSD (mL)		Spike Volume Used in MSD (mL)	
MS Aliquot (L, g, F)	0.1112	MS Aliquot (L, g, F)	0.1112
MS Target Conc. (pCi/L, g, F)	58.118	MS Target Conc. (pCi/L, g, F)	76.164
MSD Aliquot (L, g, F)		MSD Aliquot (L, g, F)	
MSD Target Conc. (pCi/L, g, F)	2.050	MSD Target Conc. (pCi/L, g, F)	4.628
MS Spike uncertainty (calculated)		MS Spike uncertainty (calculated)	
MSD Spike uncertainty (calculated)		MSD Spike uncertainty (calculated)	
Sample Result	5.593	Sample Result	3.035
Sample 1.96 Sigma Unc.	2.246	Sample 1.96 Sigma Unc.	0.817
Sample Matrix Spike Result	37.648	Sample Matrix Spike Result	81.470
Sample MS 1.96 Sigma Unc.	11.471	Sample MS 1.96 Sigma Unc.	15.750
Sample Matrix Spike Duplicate Result:		Sample Matrix Spike Duplicate Result:	
Sample MSD 1.96 Sigma Unc.		Sample MSD 1.96 Sigma Unc.	
MS % Recovery	55.15%	MS % Recovery	102.98%
MSD % Recovery		MSD % Recovery	
MS Assessment	Fail***	MS Assessment	Pass
MSD Assessment		MSD Assessment	
MS/MSD Upper % Recovery Limits	71.00%	MS/MSD Upper % Recovery Limits	130.00%
MS/MSD Lower % Recovery Limits	69.00%	MS/MSD Lower % Recovery Limits	79.00%
Matrix Spike/Matrix Spike Duplicate Sample Assessment		Matrix Spike/Matrix Spike Duplicate Sample Assessment	

Method Blank Assessment			
Analyte	Activity	MDC	Assessment
Gross Alpha	0.1260	1.4900	0.45100
Gross Beta	-0.1320	1.7800	0.60300

Laboratory Control Sample Assessment					
Analyte:	Count Date:	Gross Alpha		Gross Beta	
		LCS	LCS	LCS	LCS
Sample I.D.:	7/28/14 7:29	7/28/14 7:29	7/28/14 7:29	7/28/14 7:29	7/28/14 7:29
Spike Concentration (pCi/L)	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB
Volume Used (mL)	0.050	0.050	0.050	0.050	0.050
Aliquot Volume (L, g, F)	0.200	0.201	0.200	0.201	0.201
Target Conc. (pCi/L, g, F)	16.146	16.063	21.142	21.033	21.033
1.96 Sigma Uncertainty (Calculated)	0.570	0.567	1.285	1.278	1.278
Result (pCi/L, g, F)	13.219	14.555	23.753	20.831	20.831
1.96 Sigma Unc	3.346	3.591	4.910	4.391	4.391
% Recovery	81.87%	90.49%	112.35%	99.04%	99.04%
Assessment	Pass	Pass	Pass	Pass	Pass
Upper % Recovery Limits	121.00%	121.00%	130.00%	130.00%	130.00%
Lower % Recovery Limits	69.00%	69.00%	79.00%	79.00%	79.00%

Duplicate Sample Assessment					
LCS/LCSD Y or N?	Y	Gross Alpha		Gross Beta	
		LCS	LCS	LCS	LCS
Sample I.D.:	LCS20652	LCS20652	LCS20652	LCS20652	LCS20652
Duplicate Sample I.D.	LCS20652	LCS20652	LCS20652	LCS20652	LCS20652
Sample Result (pCi/L, g, F)	3.3460	4.9100	23.7530	20.8310	20.8310
1.96 Sigma Unc	14.5350	4.3910	NO	NO	NO
Sample Duplicate Result (pCi/L, g, F)	3.5910	13.11%	Pass	Pass	Pass
Duplicate Sample 1.96 Sigma Unc	34.00%	34.00%	29.00%	29.00%	29.00%
Relative Percent Difference	9.48%	34.00%	29.00%	29.00%	29.00%
Assessment	Pass	Pass	Pass	Pass	Pass
% RPD Limit	34.00%	34.00%	29.00%	29.00%	29.00%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

→ 2 No Limit 55-135/10
08/12/14

08/12/14

August 01, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012972

RE: PGE Hinkley, 492581.UR.SO

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SO
Lab Order: N012972

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 7199:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 01-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SO
Lab Order: N012972
Contract No: 2014-ATU-SOIL

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012972-001A	MW-860-059-Q3	Water	7/17/2014 4:18:00 PM	7/17/2014	8/1/2014
N012972-002A	C-SOIL-2-U-059-Q3	Soil	7/17/2014 1:19:00 PM	7/17/2014	8/1/2014
N012972-003A	Y-SOIL-2-D-059-Q3	Soil	7/17/2014 12:53:00 PM	7/17/2014	8/1/2014
N012972-004A	Y-SOIL-2-U-059-Q3	Soil	7/17/2014 12:42:00 PM	7/17/2014	8/1/2014
N012972-005A	G-SOIL-3-D-059-Q3	Soil	7/17/2014 10:49:00 AM	7/17/2014	8/1/2014
N012972-006A	G-SOIL-3-U-059-Q3	Soil	7/17/2014 10:33:00 AM	7/17/2014	8/1/2014
N012972-007A	C-SOIL-1-U-059-Q3	Soil	7/17/2014 11:14:00 AM	7/17/2014	8/1/2014
N012972-008A	D-SOIL-3-U-059-Q3	Soil	7/17/2014 3:22:00 PM	7/17/2014	8/1/2014
N012972-009A	C-SOIL-1-D-059-Q3	Soil	7/17/2014 11:28:00 AM	7/17/2014	8/1/2014
N012972-010A	Y-SOIL-1-U-059-Q3	Soil	7/17/2014 12:10:00 PM	7/17/2014	8/1/2014
N012972-011A	Y-SOIL-1-D-059-Q3	Soil	7/17/2014 12:20:00 PM	7/17/2014	8/1/2014
N012972-012A	D-SOIL-4-U-059-Q3	Soil	7/17/2014 1:50:00 PM	7/17/2014	8/1/2014
N012972-013A	C-SOIL-2-D-059-Q3	Soil	7/17/2014 1:30:00 PM	7/17/2014	8/1/2014
N012972-014A	D-SOIL-4-D-059-Q3	Soil	7/17/2014 2:12:00 PM	7/17/2014	8/1/2014
N012972-015A	D-SOIL-2-D-059-Q3	Soil	7/17/2014 2:51:00 PM	7/17/2014	8/1/2014
N012972-016A	D-SOIL-2-U-059-Q3	Soil	7/17/2014 2:39:00 PM	7/17/2014	8/1/2014
N012972-017A	D-SOIL-3-D-059-Q3	Soil	7/17/2014 3:35:00 PM	7/17/2014	8/1/2014
N012972-018A	G-SOIL-2-U-059-Q3	Soil	7/16/2014 3:34:00 PM	7/17/2014	8/1/2014
N012972-019A	G-SOIL-1-D-059-Q3	Soil	7/16/2014 3:10:00 PM	7/17/2014	8/1/2014
N012972-020A	G-SOIL-1-U-059-Q3	Soil	7/16/2014 2:49:00 PM	7/17/2014	8/1/2014
N012972-021A	G-SOIL-2-D-059-Q3	Soil	7/16/2014 3:44:00 PM	7/17/2014	8/1/2014



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: C-SOIL-2-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP7_140730A	QC Batch: 46201			PrepDate: 7/29/2014		Analyst: CEI
Uranium	1.3	0.085	0.52	mg/Kg-dry	1	7/30/2014 02:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** Y-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 12:42:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-004

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 1.0 0.091 0.55 mg/Kg-dry 1 7/30/2014 02:33 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-3-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 1.2 0.092 0.56 mg/Kg-dry 1 7/30/2014 02:38 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:14:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-007

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 0.83 0.088 0.54 mg/Kg-dry 1 7/30/2014 02:44 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-3-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 3:22:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 1.5 0.087 0.53 mg/Kg-dry 1 7/30/2014 02:49 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-1-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP7_140730A	QC Batch: 46201	PrepDate: 7/29/2014	Analyst: CEI
Uranium	0.89 0.089	0.54	mg/Kg-dry 1 7/30/2014 02:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-4-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 1:50:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 1.0 0.088 0.54 mg/Kg-dry 1 7/30/2014 03:11 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-016

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 2.0 0.088 0.53 mg/Kg-dry 1 7/30/2014 03:17 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/16/2014 3:34:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-018

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 0.73 0.085 0.52 mg/Kg-dry 1 7/30/2014 03:22 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/16/2014 2:49:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-020

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 1.2 0.091 0.55 mg/Kg-dry 1 7/30/2014 03:28 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_S_U_PGE

Sample ID MB-46201	SampType: MBLK	TestCode: 200.8_S_U_P	Units: mg/Kg	Prep Date: 7/29/2014	RunNo: 94357
Client ID: PBW	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815944
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.50			

Sample ID LCS-46201	SampType: LCS	TestCode: 200.8_S_U_P	Units: mg/Kg	Prep Date: 7/29/2014	RunNo: 94357
Client ID: LCSW	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815945
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	5.352	0.50	5.000	0	107 85 115

Sample ID N012972-002A-MS	SampType: MS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815963
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.484	0.52	5.159	1.348	119 75 125

Sample ID N012972-002A-MSD	SampType: MSD	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815966
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.545	0.52	5.172	1.348	120 75 125 7.484 0.817 20

Sample ID N012988-001A-MS	SampType: MS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815967
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.124	0.52	5.249	0.8354	120 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-001

Client Sample ID: MW-860-059-Q3
Collection Date: 7/17/2014 4:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 01:17 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 07:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N012972
 Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID	MB-R94244	SampType:	MBLK	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94244			
Client ID:	PBW	Batch ID:	R94244	TestNo:	EPA 218.6			Analysis Date:	7/21/2014	SeqNo:	1811174			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID	LCS-R94244	SampType:	LCS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94244			
Client ID:	LCSW	Batch ID:	R94244	TestNo:	EPA 218.6			Analysis Date:	7/21/2014	SeqNo:	1811175			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID	N012964-004ADUP	SampType:	DUP	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94244			
Client ID:	ZZZZZZ	Batch ID:	R94244	TestNo:	EPA 218.6			Analysis Date:	7/21/2014	SeqNo:	1811177			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.015 0.060 0.01719 0 20

Sample ID	N012964-004AMS	SampType:	MS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94244			
Client ID:	ZZZZZZ	Batch ID:	R94244	TestNo:	EPA 218.6			Analysis Date:	7/21/2014	SeqNo:	1811178			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.212 0.060 0.2000 0.01719 97.2 90 110

Sample ID	N012964-006AMS	SampType:	MS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94244			
Client ID:	ZZZZZZ	Batch ID:	R94244	TestNo:	EPA 218.6			Analysis Date:	7/21/2014	SeqNo:	1811180			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.228 0.060 0.2000 0.03366 97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012964-006AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.03366	96.2	90	110	0.2276	0.707	20	

Sample ID N012973-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012972-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.02599	103	90	110				

Sample ID N012975-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012976-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.060	0.2000	0	99.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.264	0.060	0.2000	0.04537	109	90	110				

Sample ID N012976-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811197						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01356	102	90	110				

Sample ID N012976-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.309	0.060	0.2000	0.1141	97.4	90	110				

Sample ID N012976-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811201						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.04489	104	90	110				

Sample ID N012976-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01782	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.01986	106	90	110				

Sample ID N012976-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03928	102	90	110				

Sample ID N012976-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03385	105	90	110				

Sample ID N012976-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.02070	103	90	110				

Sample ID N012976-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01206	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94204	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: PBW	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808463						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94204	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: LCSW	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808464						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.952	0.20	5.000	0	99.0	90	110				
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Sample ID N012968-018A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808466						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.858	0.20						0.8507	0.808	20	
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Sample ID N012968-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.919	0.20	1.000	0.8507	107	90	110				
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Sample ID N012968-018A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808468						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.914	0.20	1.000	0.8507	106	90	110	1.918	0.214	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012972-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.094	0.20	1.000	0.06030	103	90	110
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Sample ID N012976-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.040	0.20	1.000	0	104	90	110
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Sample ID N012976-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.053	0.20	1.000	0.06990	98.3	90	110
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Sample ID N012976-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.096	0.20	5.000	2.995	102	90	110
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Sample ID N012976-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808488						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.032	0.20	1.000	0	103	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808492						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.382	0.20	5.000	8.448	98.7	90	110				

Sample ID N012976-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808494						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.755	0.20	5.000	2.658	102	90	110				

Sample ID N012976-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808496						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.392	0.20	1.000	2.355	104	90	110				

Sample ID N012976-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.471	0.20	5.000	4.426	101	90	110				

Sample ID N012976-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.289	0.20	5.000	6.270	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1808504							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.090	0.20	1.000	0.07630	101	90	110				

Sample ID N012976-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1808506							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.689	0.20	5.000	4.736	99.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-002

Client Sample ID: C-SOIL-2-U-059-Q3
Collection Date: 7/17/2014 1:19:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111			PrepDate	7/21/2014	Analyst: CEI	
Chromium	6.8	0.012	0.26		mg/Kg-dry	1	7/28/2014 11:34 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:53:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	3.2 0.012	0.26	mg/Kg-dry 1 7/28/2014 12:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-2-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:42:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	7.7 0.013	0.28	mg/Kg-dry 1 7/28/2014 12:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-3-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 10:49:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	4.4 0.012 0.26	mg/Kg-dry 1	7/28/2014 12:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-3-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	6.8 0.013	0.28	mg/Kg-dry 1 7/28/2014 12:29 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:14:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-007

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICPMS METALS

EPA 3050B

EPA 6020

RunID: **ICP7_140728A** QC Batch: **46111** PrepDate: **7/21/2014** Analyst: **CEI**
Chromium 5.9 0.012 0.27 mg/Kg-dry 1 7/28/2014 12:35 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-008

Client Sample ID: D-SOIL-3-U-059-Q3
Collection Date: 7/17/2014 3:22:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111				PrepDate: 7/21/2014		Analyst: CEI
Chromium	8.3	0.012	0.26		mg/Kg-dry	1	7/28/2014 12:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: C-SOIL-1-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 11:28:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	4.1 0.012	0.26	mg/Kg-dry 1 7/28/2014 12:46 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** Y-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICPMS METALS

EPA 3050B

EPA 6020

RunID: **ICP7_140728A** QC Batch: **46111** PrepDate: **7/21/2014** Analyst: **CEI**
Chromium 8.3 0.013 0.27 mg/Kg-dry 1 7/28/2014 12:58 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-1-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111			PrepDate: 7/21/2014		Analyst: CEI
Chromium	2.7	0.012	0.26	mg/Kg-dry	1	7/28/2014 01:04 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-012

Client Sample ID: D-SOIL-4-U-059-Q3
Collection Date: 7/17/2014 1:50:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111			PrepDate	7/21/2014	Analyst: CEI	
Chromium	7.3	0.012	0.27		mg/Kg-dry	1	7/28/2014 01:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: C-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 1:30:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	4.0 0.012 0.26	mg/Kg-dry 1	7/28/2014 01:21 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-4-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 2:12:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	4.8 0.012 0.26	mg/Kg-dry 1	7/28/2014 01:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 2:51:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	3.0 0.012 0.26	mg/Kg-dry 1	7/28/2014 01:43 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-016

Client Sample ID: D-SOIL-2-U-059-Q3
Collection Date: 7/17/2014 2:39:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111			PrepDate: 7/21/2014		Analyst: CEI
Chromium	11	0.012	0.27	mg/Kg-dry	1	7/28/2014 01:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-3-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 3:35:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	4.3 0.012	0.26	mg/Kg-dry 1 7/28/2014 01:54 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-018

Client Sample ID: G-SOIL-2-U-059-Q3
Collection Date: 7/16/2014 3:34:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111				PrepDate: 7/21/2014		Analyst: CEI
Chromium	7.1	0.012	0.26		mg/Kg-dry	1	7/28/2014 01:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-019

Client Sample ID: G-SOIL-1-D-059-Q3
Collection Date: 7/16/2014 3:10:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111				PrepDate: 7/21/2014		Analyst: CEI
Chromium	2.6	0.012	0.26		mg/Kg-dry	1	7/28/2014 02:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-020

Client Sample ID: G-SOIL-1-U-059-Q3
Collection Date: 7/16/2014 2:49:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111			PrepDate: 7/21/2014		Analyst: CEI
Chromium	5.9	0.013	0.28	mg/Kg-dry	1	7/28/2014 02:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/16/2014 3:44:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46111	PrepDate: 7/21/2014	Analyst: CEI
Chromium	6.0 0.012 0.26	mg/Kg-dry 1	7/28/2014 02:16 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S_PGE

Sample ID MB-46111	SampType: MBLK	TestCode: 6020_S_PGE	Units: mg/Kg	Prep Date: 7/21/2014	RunNo: 94326
Client ID: PBS	Batch ID: 46111	TestNo: EPA 6020 EPA 3050B		Analysis Date: 7/28/2014	SeqNo: 1814611
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	ND	0.25			

Sample ID LCS-46111	SampType: LCS	TestCode: 6020_S_PGE	Units: mg/Kg	Prep Date: 7/21/2014	RunNo: 94326
Client ID: LCSS	Batch ID: 46111	TestNo: EPA 6020 EPA 3050B		Analysis Date: 7/28/2014	SeqNo: 1814612
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	5.201	0.25	5.000	0	104 85 115

Sample ID N012972-002A-MS	SampType: MS	TestCode: 6020_S_PGE	Units: mg/Kg-dry	Prep Date: 7/21/2014	RunNo: 94326
Client ID: ZZZZZZ	Batch ID: 46111	TestNo: EPA 6020 EPA 3050B		Analysis Date: 7/28/2014	SeqNo: 1814616
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	12.941	0.26	5.170	6.837	118 75 125

Sample ID N012972-002A-MSD	SampType: MSD	TestCode: 6020_S_PGE	Units: mg/Kg-dry	Prep Date: 7/21/2014	RunNo: 94326
Client ID: ZZZZZZ	Batch ID: 46111	TestNo: EPA 6020 EPA 3050B		Analysis Date: 7/28/2014	SeqNo: 1814617
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	12.873	0.26	5.167	6.837	117 75 125 12.94 0.527 20

Sample ID N012972-012A-MS	SampType: MS	TestCode: 6020_S_PGE	Units: mg/Kg-dry	Prep Date: 7/21/2014	RunNo: 94326
Client ID: ZZZZZZ	Batch ID: 46111	TestNo: EPA 6020 EPA 3050B		Analysis Date: 7/28/2014	SeqNo: 1814630
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chromium	13.558	0.27	5.392	7.257	117 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-002

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: **IC1_140722B** QC Batch: **46104** PrepDate: **7/19/2014** Analyst: **QBM**
Hexavalent Chromium ND 0.011 0.21 mg/Kg-dry 1 7/22/2014 06:23 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:53:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM			
Hexavalent Chromium	ND	0.010	0.21	mg/Kg-dry	1	7/22/2014 07:32 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-2-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:42:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM			
Hexavalent Chromium	ND	0.011	0.22	mg/Kg-dry	1	7/22/2014 08:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-3-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 10:49:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM			
Hexavalent Chromium	ND	0.010	0.20	mg/Kg-dry	1	7/22/2014 08:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-3-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM
Hexavalent Chromium	ND 0.011	0.22	mg/Kg-dry 1
			7/22/2014 09:03 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:14:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-007

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
	EPA 3060A			EPA 7199			
RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/23/2014 11:25 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-3-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 3:22:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: **IC1_140723A** QC Batch: **46104** PrepDate: **7/19/2014** Analyst: **QBM**
Hexavalent Chromium ND 0.011 0.21 mg/Kg-dry 1 7/23/2014 11:02 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:28:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: **IC1_140722B** QC Batch: **46104** PrepDate: **7/19/2014** Analyst: **QBM**
Hexavalent Chromium ND 0.011 0.21 mg/Kg-dry 1 7/22/2014 11:26 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-1-U-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM			
Hexavalent Chromium	ND	0.011	0.22	mg/Kg-dry	1	7/22/2014 11:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-1-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104	PrepDate: 7/19/2014	Analyst: QBM			
Hexavalent Chromium	ND	0.010	0.20	mg/Kg-dry	1	7/23/2014 12:12 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-4-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 1:50:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: **IC1_140722B** QC Batch: **46104** PrepDate: **7/19/2014** Analyst: **QBM**
Hexavalent Chromium ND 0.011 0.21 mg/Kg-dry 1 7/23/2014 12:35 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-2-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 1:30:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-013

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: **IC1_140723A** QC Batch: **46104** PrepDate: **7/19/2014** Analyst: **QBM**
Hexavalent Chromium ND 0.010 0.20 mg/Kg-dry 1 7/23/2014 11:48 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-014

Client Sample ID: D-SOIL-4-D-059-Q3
Collection Date: 7/17/2014 2:12:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/23/2014 08:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-015

Client Sample ID: D-SOIL-2-D-059-Q3
Collection Date: 7/17/2014 2:51:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.010	0.21		mg/Kg-dry	1	7/23/2014 08:46 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-016

Client Sample ID: D-SOIL-2-U-059-Q3
Collection Date: 7/17/2014 2:39:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/23/2014 01:32 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-017

Client Sample ID: D-SOIL-3-D-059-Q3
Collection Date: 7/17/2014 3:35:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/23/2014 09:08 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-018

Client Sample ID: G-SOIL-2-U-059-Q3
Collection Date: 7/16/2014 3:34:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate: 7/19/2014		Analyst: QBM
Hexavalent Chromium	ND	0.011	0.21	mg/Kg-dry	1	7/23/2014 09:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-019

Client Sample ID: G-SOIL-1-D-059-Q3
Collection Date: 7/16/2014 3:10:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.010	0.21		mg/Kg-dry	1	7/23/2014 09:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-020

Client Sample ID: G-SOIL-1-U-059-Q3
Collection Date: 7/16/2014 2:49:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140723A	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.22		mg/Kg-dry	1	7/23/2014 10:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-021

Client Sample ID: G-SOIL-2-D-059-Q3
Collection Date: 7/16/2014 3:44:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140722B	QC Batch: 46104			PrepDate	7/19/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.010	0.20		mg/Kg-dry	1	7/23/2014 02:06 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_S_PGE

Sample ID MB-46104	SampType: MBLK	TestCode: 7199_S_PGE	Units: mg/Kg	Prep Date: 7/19/2014	RunNo: 94290						
Client ID: PBS	Batch ID: 46104	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/22/2014	SeqNo: 1813094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.20

Sample ID LCS-46104	SampType: LCS	TestCode: 7199_S_PGE	Units: mg/Kg	Prep Date: 7/19/2014	RunNo: 94290						
Client ID: LCSS	Batch ID: 46104	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/22/2014	SeqNo: 1813095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 3.769 0.20 4.000 0 94.2 80 120

Sample ID N012972-002A-DUP	SampType: DUP	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/19/2014	RunNo: 94290						
Client ID: ZZZZZZ	Batch ID: 46104	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/22/2014	SeqNo: 1813098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.21 0.01883 0 20

Sample ID N012972-002A-MS	SampType: MS	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/19/2014	RunNo: 94290						
Client ID: ZZZZZZ	Batch ID: 46104	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/22/2014	SeqNo: 1813099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 1.833 0.21 4.116 0.01883 44.1 75 125 S

Sample ID N012972-002A-MSD	SampType: MSD	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/19/2014	RunNo: 94290						
Client ID: ZZZZZZ	Batch ID: 46104	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/22/2014	SeqNo: 1813100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 1.662 0.21 4.113 0.01883 40.0 75 125 1.833 9.76 20 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_S_PGE

Sample ID	N012972-002A_MS_I	SampType:	MS	TestCode:	7199_S_PGE	Units:	mg/Kg-dry	Prep Date:	7/19/2014	RunNo:	94290												
Client ID:	ZZZZZZ	Batch ID:	46104	TestNo:	EPA 7199		EPA 3060A	Analysis Date:	7/22/2014	SeqNo:	1813101												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	
Hexavalent Chromium		536.555		10		723.0		0.01883		74.2		75		125									S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012972
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012972-002

Client Sample ID: C-SOIL-2-U-059-Q3
Collection Date: 7/17/2014 1:19:00 PM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725A	QC Batch: R94307				PrepDate		Analyst: LCC
Percent Moisture	3.328	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:53:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725A	QC Batch: R94307			PrepDate		Analyst: LCC
Percent Moisture	3.186	0.1000	0.1000	wt%	1	7/25/2014

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** Y-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 12:42:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-004

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 9.660 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-3-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 10:49:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-005

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 2.988 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-3-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 10.97 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:14:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-007

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 6.568 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-3-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 3:22:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 6.108 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** C-SOIL-1-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 11:28:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 5.491 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** Y-SOIL-1-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 7.463 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: Y-SOIL-1-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725A	QC Batch: R94307			PrepDate			Analyst: LCC
Percent Moisture	2.461	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-4-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 1:50:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 7.270 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: C-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 1:30:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725A	QC Batch: R94307			PrepDate			Analyst: LCC
Percent Moisture	2.458	0.1000	0.1000	wt%	1		7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-4-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 2:12:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-014

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725A** QC Batch: **R94307** PrepDate Analyst: **LCC**
Percent Moisture 5.127 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-2-D-059-Q3
Lab Order: N012972	Collection Date: 7/17/2014 2:51:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725A	QC Batch: R94307			PrepDate			Analyst: LCC
Percent Moisture	2.568	0.1000	0.1000	wt%	1		7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-016

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725B** QC Batch: **R94308** PrepDate Analyst: **LCC**
Percent Moisture 6.456 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-3-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/17/2014 3:35:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-017

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725B** QC Batch: **R94308** PrepDate Analyst: **LCC**
Percent Moisture 5.280 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-2-U-059-Q3
Lab Order: N012972 **Collection Date:** 7/16/2014 3:34:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-018

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725B** QC Batch: **R94308** PrepDate Analyst: **LCC**
Percent Moisture 4.297 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-1-D-059-Q3
Lab Order: N012972	Collection Date: 7/16/2014 3:10:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	3.108	0.1000	0.1000	wt%	1		7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-SOIL-1-U-059-Q3
Lab Order: N012972	Collection Date: 7/16/2014 2:49:00 PM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012972-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	9.777	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-SOIL-2-D-059-Q3
Lab Order: N012972 **Collection Date:** 7/16/2014 3:44:00 PM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012972-021

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

PERCENT MOISTURE

D2216

RunID: **WETCHEM_140725B** QC Batch: **R94308** PrepDate Analyst: **LCC**
Percent Moisture 2.432 0.1000 0.1000 wt% 1 7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID MB-R94307	SampType: MBLK	TestCode: PMOIST	Units: wt%	Prep Date:	RunNo: 94307						
Client ID: PBS	Batch ID: R94307	TestNo: D2216		Analysis Date: 7/25/2014	SeqNo: 1813638						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	ND	0.1000									

Sample ID N012972-015A-DUP	SampType: DUP	TestCode: PMOIST	Units: wt%	Prep Date:	RunNo: 94307						
Client ID: ZZZZZZ	Batch ID: R94307	TestNo: D2216		Analysis Date: 7/25/2014	SeqNo: 1813653						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	2.507	0.1000						2.568	2.40	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SO Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-SOIL-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly (NH4)2, SO4, NH4, OH, 4°C Preservatives: Filtered: Field Holding Time (days): 28			4-8oz jar 4-8oz jar 4-8oz jar 4°C 4°C 4°C NA NA NA 30 30 30			Please change the sample IDs as indicated below. <i>Shawn P. Duffy</i> 07/22/2014		Number of Containers	COMMENTS
				Cr (M) (E218.6) FF	Metals (6020A) Cr	Cr (M) (7199)	Uranium (200.8)	N012972					
SAMPLE ID	DATE	TIME	Matrix										
MW-860-059-Q3	7-17-14	1618	W	X									
COT SOIL 2-0 0.5	7-17-14	1319	SO		X	X	X	C-SOIL-1-U-059-Q3					
YANG SOIL 2-5 5.5	7-17-14	1253	SO		X	X		Y-SOIL-2-D-059-Q3					
YANG SOIL 2-0 0.5	7-17-14	1242	SO		X	X	X	Y-SOIL-2-U-059-Q3					
GOR SOIL 3-5 5.5	7-17-14	1049	SO		X	X		G-SOIL-3-D-059-Q3					
GOR SOIL 3-0 0.5	7-17-14	1033	SO		X	X	X	G-SOIL-3-U-059-Q3					
COT SOIL 2-0 0.5	7-17-14	1114	SO		X	X	X	C-SOIL-1-U-059-Q3					
DND SOIL 3-0 0.5	7-17-14	1522	SO		X	X	X	D-SOIL-3-U-059-Q3					
COT SOIL 2-5 5.5	7-17-14	1128	SO		X	X		C-SOIL-1-D-059-Q3					
YANG SOIL 2-0 0.5	7-17-14	1210	SO		X	X	X	Y-SOIL-1-U-059-Q3					
YANG SOIL 2-5 5.5	7-17-14	1220	SO		X	X		Y-SOIL-1-D-059-Q3					
DND SOIL 4-0 0.5	7-17-14	1350	SO		X	X	X	D-SOIL-4-U-059-Q3					
COT SOIL 2-5 5.5	7-17-14	1330	SO		X	X		C-SOIL-2-D-059-Q3					
DND SOIL 4-5 5.5	7-17-14	1412	SO		X	X		D-SOIL-4-D-059-Q3					
DND SOIL 2-5 5.5	7-17-14	1451	SO		X	X		D-SOIL-2-D-059-Q3					
TOTAL NUMBER OF CONTAINERS													

Approved by <i>K. Blain</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Signatures Date/Time 7-17-14 1650 7-17-14 1650 7-17-14 1650 7/17/14 1650 7/17/14 1650 7/17/14 1650		Shipping Details Method of Shipment: On ice: yes / no 2-8-20 Airbill No: 1R#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN:		Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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Project Name	PGE Hinkley	Container:	250 ml Poly (NH4)2SO4, NH4, OH, 4°C	4-8oz jar	4-8oz jar	4-8oz jar							
Location	Hinkley	Preservatives:	Field	NA	NA	NA							
Project Number	492581.UR.SO	Filtered:	28	30	30	30							
Project Manager	Jennifer Low	Holding Time (days):	Cr (M) (E218.6) FF	Metals (6020A) Cr	Cr (M) (7199)	Uranium (200.8)							
Sample Manager	Jim Hanvey												
Cell Number	(404) 229-2181												
Fax Number	(510) 622-9136												
Task Order	59												
Project	2014-ATU-SOIL-059-Q3												
Turnaround Time	10 Days												
Shipping Date:													
COC Number:													
SAMPLE ID	DATE	TIME	Matrix									Number of Containers	COMMENTS

MW-860-059-Q3	7-17-14	1618	W	X									
COT-SOIL-2-0-0.5	7-17-14	1319	SO		X	X	X					-2	
YANG-SOIL-2-5-5.5	7-17-14	1253	SO		X	X						-3	
YANG-SOIL-2-0-0.5	7-17-14	1242	SO		X	X	X					-4	
GOR-SOIL-3-5-5.5	7-17-14	1049	SO		X	X						-5	
GOR-SOIL-3-0-0.5	7-17-14	1033	SO		X	X	X					-6	
COT-SOIL-1-0-0.5	7-17-14	1114	SO		X	X	X					-7	
DND-SOIL-3-0-0.5	7-17-14	1522	SO		X	X	X					-8	
COT-SOIL-1-5-5.5	7-17-14	1128	SO		X	X						-9	
YANG-SOIL-1-0-0.5	7-17-14	1210	SO		X	X	X					-10	
YANG-SOIL-1-5-5.5	7-17-14	1220	SO		X	X						-11	
DND-SOIL-4-0-0.5	7-17-14	1350	SO		X	X	X					-12	
COT-SOIL-2-5-5.5	7-17-14	1330	SO		X	X						-13	
DND-SOIL-4-5-5.5	7-17-14	1412	SO		X	X						-14	
DND-SOIL-2-5-5.5	7-17-14	1451	SO		X	X						-15	

TOTAL NUMBER OF CONTAINERS

<p>Approved by: <i>[Signature]</i></p> <p>Sampled by: <i>[Signature]</i></p> <p>Relinquished by: <i>[Signature]</i></p> <p>Received by: <i>[Signature]</i></p> <p>Relinquished by: <i>[Signature]</i></p> <p>Received by: <i>[Signature]</i></p>	<p>Signatures</p> <p>Date/Time</p> <p>7-17-14 1650</p> <p>7-17-14 1650</p> <p>7-17-14 1650</p> <p>7/17/14 1650</p> <p>7/17/14 1650</p> <p>7/17/14 1650</p>	<p>Shipping Details</p> <p>Method of Shipment:</p> <p>On Ice: <input checked="" type="checkbox"/> yes / no <i>2-5-2</i></p> <p>Airbill No: <i>1072</i></p> <p>Lab Name: Advanced Technology Laboratories</p> <p>Lab Phone: (702) 307-2659</p>	<p>ATTN:</p>	<p>Special Instructions:</p> <p>Report Copy to:</p> <p>Shawn Duffy</p> <p>(530) 941-9227</p> <p>2525 Airpark Drive, Redding, CA 96001</p>
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/17/2014 Workorder: N012972
 Rep sample Temp (Deg C): 2.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC Alcortez 07/18/2014

Reviewed By: [Signature] 07/28/14

amanda.cortes@assetlaboratories.com

From: Katherine.Blinn@ch2m.com
Sent: Friday, July 18, 2014 9:02 AM
To: amanda.cortes@assetlaboratories.com
Cc: marlon@atl-labs.com; Jim.Harvey@CH2M.com; samplecontrol.lv@assetlaboratories.com
Subject: RE: ATU-SOIL and GMP
Attachments: COC_GMP_071714_Revised.pdf

Hi Amanda,

As far as I know, the ATU-SOIL sample IDs are correct as written on the COC and on the sample containers. As for the GMP sample, MW-847-059-Q3 should only be analyzed for Cr+6. The corrected COC is attached to this email.

Please let me know if you have any other questions.

Katherine A.T. Blinn, E.I.T.

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Friday, July 18, 2014 8:49 AM
To: Blinn, Katherine/NJO
Cc: 'Marlon Cartin'; Harvey, Jim/BAO; 'ASSET, Inc. Sample Control'
Subject: ATU-SOIL and GMP

Hello, Katherine.

I have a couple of questions. Please advise on the following:

1. For ATU-SOIL, are the samples to include the "-059-Q3" at the end of the sample ID, or should it be left off as per the COC and sample containers?
2. For GMP, we received one sample "MW-847-059-Q3" that is marked for Cr+6 and Dissolved Metals on the COC. However, we only received Cr+6 and the sample table indicates that only Cr+6 is for this sample.

Please reference the attached COCs.

Thank you,

Amanda M. Cortes
Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341
California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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ASSET LABORATORIES is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Soil

FORMULA:

Calculate the Uranium concentration, in mg/Kg-dry, in the original sample as follows:

$$\text{Uranium, mg/Kg-dry} = \frac{(A * C * DF * 100)}{(B * (100 - \text{pMoist}) * 1000)}$$

where:

A = ug/L, ICP-MS calculated concentration

B = weight of original sample, Kg

DF = dilution factor

C = Final Vol. of Digestate, L

PMoist = Percent Moisture of Sample

For Sample **N012972-002A**, the concentration in mg/Kg-dry is calculated as follows:

$$\begin{aligned} \text{Uranium, mg/Kg-dry} &= \frac{2.60671288576487 * 0.1 \text{ L} * 10 * 100}{0.002001 \text{ Kg} * (100 - 3.328) * 1000} \\ &= 1.34755167117737 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, mg/Kg-dry} = 1.3$$

 8/1/2014

CLIENT: CH2M HILL
Work Order: N012972
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_S_U_PGE

Sample ID: N012972-002A-PS	SampType: PS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date:	RunNo: 94357						
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8	Analysis Date: 7/30/2014	SeqNo: 1815962							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	7.234	0.52	5.170	1.348	114	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012972-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.025988 * 1 \\ &= 0.025988\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/31/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012972-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.0603 * 1 \\ &= 0.0603\end{aligned}$$

Since PQL is $0.20 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/31/2014

Sample Calculation

METHOD: EPA 6020B

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Soil/Sludge/Solid

FORMULA:

Calculate the Chromium concentration, in mg/Kg-dry, in the original sample as follows:

$$\text{Chromium, mg/Kg-dry} = \frac{(A * C * DF * 100)}{(B * (100 - \text{pMoist}) * 1000)}$$

where:

A = ug/L, ICP-MS calculated concentration

B = weight of original sample, Kg

DF = dilution factor

C = Final Vol. of Digestate, L

PMoist = Percent Moisture of Sample

For Sample **N012972-002A**, the concentration in mg/Kg-dry is calculated as follows:

$$\begin{aligned} \text{Chromium, mg/Kg-dry} &= \frac{13.238143264 * 0.1 \text{ L} * 10 * 100}{0.002003 \text{ Kg} * (100 - 3.328) * 1000} \\ &= 6.83668301655942 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, mg/Kg-dry} = 6.8$$

Danny 8/1/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012972
Test Method: EPA 6020
Analysis Date: 7/28/2014

Dilution Test Summary

Matrix: Soil
Batch No.: 46111

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012972-002A-DT 5X	Chromium	mg/Kg-dry	6.563598564	PASS	6.836683017	3.99%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
 Work Order: N012972
 Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S_PGE

Sample ID: N012972-002A-PS	SampType: PS	TestCode: 6020_S_PGE	Units: mg/Kg-dry	Prep Date:	RunNo: 94326						
Client ID: ZZZZZZ	Batch ID: 46111	TestNo: EPA 6020	EPA 3050B	Analysis Date: 7/28/2014	SeqNo: 1814615						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	12.752	0.26	5.164	6.837	115	80	120				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

Sample Calculation

METHOD: EPA 7199

TEST NAME: HEXAVALENT CHROMIUM BY IC

MATRIX: Soil

FORMULA:

Calculate the Hexavalent Chromium concentration, in mg/Kg, in the original sample as follows:

$$\text{Cr}^{+6}, \text{ mg/Kg-dry} = \frac{(A * \text{DF} * 0.1 * 20) \times 100}{B (100-\% \text{Moisture}) 1000}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration

DF = dilution factor

B = weight of sample in kg


20 = dilution due to the matrix of the digestate

For **N012972-002A**, concentration in mg/Kg is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \text{ mg/Kg-dry} &= \frac{(0.022858 * 1 * 0.1 * 20) \times 100}{0.002511 (100-3.328) 1000} \\ &= 0.018833 \end{aligned}$$

Since PQL is 0.2 mg/ g,

$$\text{Cr}^{+6}, \text{ mg/Kg-dry} = \text{ND}$$

 8/1/2014

July 24, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012973

RE: PGE Hinkley, 492584.UR.DM.FW

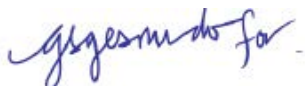
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012973

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N012973
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012973-001A	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	7/24/2014
N012973-001B	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	7/24/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 24-Jul-14

CLIENT: CH2M HILL
Lab Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N012973-001

Client Sample ID: 34-06-059-Q3
Collection Date: 7/17/2014 9:02:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 12:35 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 02:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94244	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: PBW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811174
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94244	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: LCSW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811175
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.204	0.060	0.2000	0	102 90 110
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Sample ID N012964-004ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811177
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.015	0.060			0.01719 0 20
---------------------	-------	-------	--	--	--------------

Sample ID N012964-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811178
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.212	0.060	0.2000	0.01719	97.2 90 110
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Sample ID N012964-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811180
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.228	0.060	0.2000	0.03366	97.0 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012964-006AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.03366	96.2	90	110	0.2276	0.707	20	

Sample ID N012973-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012972-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.02599	103	90	110				

Sample ID N012975-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012976-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.060	0.2000	0	99.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.264	0.060	0.2000	0.04537	109	90	110				

Sample ID N012976-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811197						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01356	102	90	110				

Sample ID N012976-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.309	0.060	0.2000	0.1141	97.4	90	110				

Sample ID N012976-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811201						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.04489	104	90	110				

Sample ID N012976-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01782	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.01986	106	90	110				

Sample ID N012976-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03928	102	90	110				

Sample ID N012976-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03385	105	90	110				

Sample ID N012976-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.02070	103	90	110				

Sample ID N012976-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01206	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94206	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: PBW	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808626						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94206	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: LCSW	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.898	0.20	5.000	0	98.0	90	110				
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Sample ID N012963-021A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808630						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.158	0.20						4.123	0.853	20	
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Sample ID N012963-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.971	0.20	5.000	4.123	97.0	90	110				
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Sample ID N012963-021A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.103	0.20	5.000	4.123	99.6	90	110	8.971	1.46	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012973-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46100	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: PBW	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811059						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46100	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: LCSW	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811060						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.019 1.0 10.00 0 110 85 115

Sample ID N012973-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.642 1.0 10.00 0.07660 106 75 125

Sample ID N012973-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811065						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.593 1.0 10.00 0.07660 105 75 125 10.64 0.460 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.DM.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 5 Days Shipping Date: COC Number:				Containers: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180 Metals Dissolved (6020AFF) FF Cr	Number of Containers COMMENTS
SAMPLE ID	DATE	TIME	Matrix			
34-06-059-Q3	7/17/14	0902	GW	X X NO12973-1	JM 2 Waters	
				TOTAL NUMBER OF CONTAINERS 2		

Signatures Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7-17-14 1650 7-17-14 1650 7-17-14 1650 7/19/14 1650 7/17/14 1958 5/19/14 1958	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <i>S.G.C. 1/2#2</i> Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.


Cooler Received/Opened On: 7/17/2014 Workorder: N012973
 Rep sample Temp (Deg C): 3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist


- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  07/18/2014

Reviewed By:

 07/21/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012973-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/24/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012973-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.20 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/24/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012973-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 0.0766048388224552 * 1 * (25/25) \\ &= 0.0766048388224552 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 0.077$$

Since PQL of Chromium is 1.0 ug/L,

$$\text{Chromium, ug/L} = \text{ND}$$

Nancy 7/23/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012973
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46100

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012973-001B-DT 5X	Chromium	µg/L	0	NA	0.076604839	100.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012973
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012973-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46100	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811063							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.720	2.0	20.00	0.07660	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 01, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012974

RE: PGE Hinkley, 492584.UR.AU

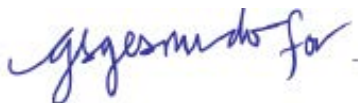
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012974

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) on QC sample N012977-004B-MS is outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Arsenic since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N012974
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012974-001A	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	8/1/2014
N012974-001B	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	8/1/2014
N012974-001C	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	8/1/2014
N012974-001D	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	8/1/2014
N012974-001E	34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	7/17/2014	8/1/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 34-06-059-Q3
Lab Order: N012974	Collection Date: 7/17/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012974-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	300	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	SampType	TestCode	Units	Prep Date	RunNo	Client ID	Batch ID	TestNo	Analysis Date	SeqNo	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
MB-46106	MBLK	160.1_2540C	mg/L	7/21/2014	94239	PBW	46106	SM2540C	7/21/2014	1811024	Total Dissolved Solids (Residue, Filtera	ND	10											
LCS-46106	LCS	160.1_2540C	mg/L	7/21/2014	94239	LCSW	46106	SM2540C	7/21/2014	1811025	Total Dissolved Solids (Residue, Filtera	970.000	10	1000	0	97.0	80	120						
N012977-001D-DUP	DUP	160.1_2540C	mg/L	7/21/2014	94239	ZZZZZ	46106	SM2540C	7/21/2014	1811029	Total Dissolved Solids (Residue, Filtera	3360.000	29						3414	1.60	5			

Qualifiers:

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- E Value above quantitation range
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- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 34-06-059-Q3
Lab Order: N012974	Collection Date: 7/17/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012974-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	ND	0.011	0.67	pCi/L	1	7/24/2014 12:11 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46118	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: PBW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812788
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46118	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: LCSW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812789
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	6.627	0.67	6.700	0	98.9 85 115

Sample ID N012965-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812795
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	15.140	0.67	6.700	7.264	118 75 125

Sample ID N012965-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812796
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	14.903	0.67	6.700	7.264	114 75 125 15.14 1.58 20

Sample ID N012977-004B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/24/2014	SeqNo: 1812809
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	81.366	0.67	6.700	69.45	178 75 125 S

Qualifiers:

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- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 34-06-059-Q3
Lab Order: N012974	Collection Date: 7/17/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N012974-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate			Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/18/2014 10:55 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
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	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94211_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211
Client ID: PBW	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809395
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N ND 0.050

Sample ID LCS-R94211_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211
Client ID: LCSW	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809396
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 1.017 0.050 1.000 0 102 90 110

Sample ID N012975-007C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211
Client ID: ZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809419
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 7.400 0.50 7.380 0.271 20

Sample ID N012975-009C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211
Client ID: ZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809420
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 8.300 0.50 8.230 0.847 20

Sample ID N012975-007C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211
Client ID: ZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809421
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N 17.760 0.50 10.00 7.380 104 80 120

Qualifiers:

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- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012975-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.590	0.50	10.00	7.380	102	80	120	17.76	0.962	20	

Sample ID N012975-009C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	18.100	0.50	10.00	8.230	98.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** 34-06-059-Q3
Lab Order: N012974 **Collection Date:** 7/17/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012974-001

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140719A** QC Batch: **R94219** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/19/2014 09:22 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94219	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: PBW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810025
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94219	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: LCSW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810026
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.696 1.0 10.00 0 107 85 115

Sample ID N012965-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810027
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.539 1.0 10.00 0.1124 104 75 125

Sample ID N012965-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810028
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.365 1.0 10.00 0.1124 103 75 125 10.54 1.67 20

Qualifiers:

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- Calculations are based on raw values
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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** 34-06-059-Q3
Lab Order: N012974 **Collection Date:** 7/17/2014 9:02:00 AM
Project: PGE Hinkley, 492584.UR.AU **Matrix:** GROUNDWATER
Lab ID: N012974-001

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140721B** QC Batch: **46103** PrepDate: **7/19/2014** Analyst: **CEI**
Iron 0.14 0.0013 0.020 mg/L 1 7/21/2014 05:49 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46103	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: PBW	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810795
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.005	0.020			

Sample ID LCS-46103	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: LCSW	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810796
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.095	0.020	0.1000	0	95.0 85 115

Sample ID N012974-001A-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: ZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810800
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.247	0.020	0.1000	0.1445	103 75 125

Sample ID N012974-001A-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: ZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810801
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.245	0.020	0.1000	0.1445	100 75 125 0.2470 0.970 20

Qualifiers:

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- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012974
Project: PGE Hinkley, 492584.UR.AU
Lab ID: N012974-001

Client Sample ID: 34-06-059-Q3
Collection Date: 7/17/2014 9:02:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Arsenic	11	0.027	0.10		µg/L	1	7/22/2014 12:31 PM
Manganese	140	0.026	0.50		µg/L	1	7/22/2014 12:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
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 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46101	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243
Client ID: PBW	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/22/2014	SeqNo: 1811142
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	0.031	0.10			
Manganese	ND	0.50			

Sample ID LCS-46101	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243
Client ID: LCSW	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/22/2014	SeqNo: 1811143
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.666	0.10	10.00	0	107 85 115
Manganese	111.523	0.50	100.0	0	112 85 115

Sample ID N012976-022B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/22/2014	SeqNo: 1811149
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Manganese	115.794	0.50	100.0	13.50	102 75 125

Sample ID N012976-022B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/22/2014	SeqNo: 1811150
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Manganese	116.007	0.50	100.0	13.50	103 75 125 115.8 0.184 20

Sample ID N012976-022B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/22/2014	SeqNo: 1811161
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	450.692	0.50	10.00	430.9	198 75 125 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	N012976-022B-MSD	SampType:	MSD	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/19/2014	RunNo:	94243		
Client ID:	ZZZZZZ	Batch ID:	46101	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/22/2014	SeqNo:	1811162		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		450.912		0.50	10.00	430.9	200	75	125	450.7	0.0489	20	S

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.AU Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	2x1000 ml Poly	Number of Containers	COMMENTS
Preservatives:				HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	HNO3			
Filtered:				Field	Field	Field	Field	NA	NA	NA			
Holding Time (days):				180	180	180	2	7	28	180			
SAMPLE ID	DATE	TIME	Matrix	Metals Dissolved (6010BDIS) FF Fe	Metals Dissolved (6020AFF) FF As,Mn	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	TOC (E6310)	Gross Alpha/Beta (SM710B/E900)			
34-06-059-Q3	7/17/14	0902	GW	X	X	X	X	X	X	X	8	N012974-1 Waters	
TOTAL NUMBER OF CONTAINERS											8		

Signatures Approved by <i>H. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7-17-14 1650 7-17-14 1650 7-17-14 1650 7/17/14 1650 7/17/14 1650 7/17/14 1650	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3-6-12 Airbill No: 1242 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
---	--	---	--------------	---

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/17/2014 Workorder: N012974
 Rep sample Temp (Deg C): 3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC Alcort 07/18/2014

Reviewed By: gog 07/21/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.asset-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

18-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 900.0	
N012974-001E / 34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	32OZP	1	

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012974 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Trk# 7706 4108 1646
Mps# 7706 4108 1554

Date/Time	Date/Time
Relinquished by: PAUL GUMAWID <i>[Signature]</i> 07/18/14 17:00	Received by: _____
Relinquished by: _____	Received by: _____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012974-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.4042-63.3747)*1000000}{100}$$

295 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 300 \text{ mg/L}$$


7/23/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/21/2014								TDS/CONDUCTIVITY
Date Finished: 7/22/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46106	100	64.1088	64.1091	3	1	3.00		
LCS-46106	100	63.5089	63.6059	970	1	970.00		
N012974-001C	100	63.3747	63.4042	295	1	295.00	390	0.76
N012975-016D	100	63.7999	63.8702	703	1	703.00	988	0.71
N012977-001D	35	63.9748	64.0943	1195	2.8571429	3414.29	4040	0.85
N012977-001D-DUP	35	63.9959	64.1135	1176	2.8571429	3360.00	4040	0.83
N012977-002D	35	62.9967	63.1105	1138	2.8571429	3251.43	4040	0.80
N012977-003D	100	63.7809	63.9274	1465	1	1465.00	2040	0.72
N012977-004D	100	64.2745	64.5694	2949	1	2949.00	3820	0.77
N012977-005D	100	61.3654	61.4955	1301	1	1301.00	1840	0.71
N012977-006D	100	60.6371	60.7374	1003	1	1003.00	1633	0.61
N012977-007D	100	61.7311	61.8371	1060	1	1060.00	1607	0.66
N012977-008D	100	60.8359	60.9544	1185	1	1185.00	1732	0.68
N012977-009C	70	61.1351	61.2455	1104	1.4285714	1577.14	2130	0.74
N012977-010C	65	64.2554	64.3676	1122	1.5384615	1726.15	2320	0.74
N012977-011D	100	61.6737	61.7962	1225	1	1225.00	1739	0.70
N012990-007C	100	60.5348	60.6313	965	1	965.00	1466	0.66
N012990-014E	100	60.7711	60.8051	340	1	340.00	487	0.70

Jmer
7/23/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012974-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:


$$\begin{aligned} \text{Uranium, pCi/L} &= 0.0304556320610049 * 1 * (25/25) * 0.67 \\ &= 0.0204052734808733 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 0.020$$

Since PQL of Uranium is 0.67 pCi/L,

$$\text{Uranium, pCi/L} = \text{ND}$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012974
Test Method: EPA 200.8
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46118

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012965-001A-DT 5X	Uranium	pCi/L	7.311465653	NA	7.26380436	0.66%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012965-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8	Analysis Date: 7/23/2014	SeqNo: 1812792							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	21.589	1.3	13.40	7.264	107	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012974-001B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.000000 * 1 \\ &= 0.000000 \end{aligned}$$

Since PQL is 0.05 mg/L,

$$\text{Nitrate, mg/L} = \text{ND}$$

 8/1/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012974-001D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.18130] [1] - 0.08490$$

$$\text{TOC} = 0.09640$$

Reporting results in two significant figures,

$$\text{TOC} = \mathbf{0.096} \text{ mg/L}$$

$$\text{TOC} = \mathbf{ND}$$

PS 7/30/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012974-001A**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.1445285937 * 1 * (25/25) \\ &= 0.1445285937 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.14$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012974
Test Method: EPA 6010
Analysis Date: 7/21/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46103

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012974-001A-DT 5X	Iron	mg/L	0.152296518	NA	0.144528594	5.37%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012974-001A-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94232						
Client ID: ZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/21/2014	SeqNo: 1810799							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	5.222	0.040	5.000	0.1445	102	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Manganese concentration, in ug/L, in the original sample as follows:

$$\text{Manganese, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012974-001A**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Manganese, ug/L} &= 141.87109396 * 1 * (25/25) \\ &= 141.87109396 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Manganese, ug/L} = 140$$

Nancy 8/1/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012974
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46101

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012976-022B-DT 25X	Arsenic	µg/L	439.1202544	PASS	430.8741134	1.91%	10
N012976-022B-DT 5X	Manganese	µg/L	14.19462652	PASS	13.49846505	5.16%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012974
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012976-022B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811148						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	213.240	1.0	200.0	13.50	99.9	80	120				

Sample ID: N012976-022B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811160						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	485.214	0.50	50.00	430.9	109	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 13, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012974
Pace Project No.: 30125720

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012974
Pace Project No.: 30125720

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125720001	N012974-001E/34-06-059-Q3	Water	07/17/14 09:02	07/24/14 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012974
Pace Project No.: 30125720

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125720001	N012974-001E/34-06-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012974

Pace Project No.: 30125720

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 13, 2014

General Information:

1 sample was analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012974
Pace Project No.: 30125720

QC Batch:	RADC/20697	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30125720001		

METHOD BLANK:	765898	Matrix:	Water
Associated Lab Samples:	30125720001		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.131 ± 0.552 (1.66) C:NA T:NA	pCi/L	07/31/14 06:40	
Gross Beta	-0.382 ± 0.654 (1.78) C:NA T:NA	pCi/L	07/31/14 06:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

30125720

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

Field Sampler: SIGNED

18-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests
N012974-001E / 34-06-059-Q3	Groundwater	7/17/2014 9:02:00 AM	32OZP	1	001

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012974 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Trk# 7706 4108 1646
 Mps# 7706 4108 1554

Date/Time	Date/Time
Relinquished by: PAUL GUMANID <i>[Signature]</i>	7-22-14 08:50
Relinquished by: <i>[Signature]</i>	



Sample Condition Upon Receipt

Client Name: ASSET

Project # 30125720

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770647769230

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other Paper

Thermometer Used NA Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and initials of person examining contents: 7/24/14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>NA</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>pH < 2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>VEN</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Carmen Sanis

Date: 7/25/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 01, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012975

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012975

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Manganese since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 01-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012975
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012975-001A	MW-757-059b-Q3	Water	7/17/2014 12:20:00 PM	7/17/2014	8/1/2014
N012975-002A	PT2-MW-08-059b-Q3	Water	7/17/2014 10:35:00 AM	7/17/2014	8/1/2014
N012975-002B	PT2-MW-08-059b-Q3	Water	7/17/2014 10:35:00 AM	7/17/2014	8/1/2014
N012975-003A	MW-928-059b-Q3	Water	7/17/2014 9:20:00 AM	7/17/2014	8/1/2014
N012975-003B	MW-928-059b-Q3	Water	7/17/2014 9:20:00 AM	7/17/2014	8/1/2014
N012975-004A	PT2-MW-09-059b-Q3	Water	7/17/2014 9:19:00 AM	7/17/2014	8/1/2014
N012975-004B	PT2-MW-09-059b-Q3	Water	7/17/2014 9:19:00 AM	7/17/2014	8/1/2014
N012975-005A	PT2-MW-10-059b-Q3	Water	7/17/2014 11:55:00 AM	7/17/2014	8/1/2014
N012975-005B	PT2-MW-10-059b-Q3	Water	7/17/2014 11:55:00 AM	7/17/2014	8/1/2014
N012975-006A	PT2-MW-11-059b-Q3	Water	7/17/2014 1:11:00 PM	7/17/2014	8/1/2014
N012975-006B	PT2-MW-11-059b-Q3	Water	7/17/2014 1:11:00 PM	7/17/2014	8/1/2014
N012975-007A	CA-RW-16-059b-Q3	Water	7/17/2014 10:56:00 AM	7/17/2014	8/1/2014
N012975-007B	CA-RW-16-059b-Q3	Water	7/17/2014 10:56:00 AM	7/17/2014	8/1/2014
N012975-007C	CA-RW-16-059b-Q3	Water	7/17/2014 10:56:00 AM	7/17/2014	8/1/2014
N012975-008A	CA-RW-17-059b-Q3	Water	7/17/2014 11:51:00 AM	7/17/2014	8/1/2014
N012975-008B	CA-RW-17-059b-Q3	Water	7/17/2014 11:51:00 AM	7/17/2014	8/1/2014
N012975-008C	CA-RW-17-059b-Q3	Water	7/17/2014 11:51:00 AM	7/17/2014	8/1/2014
N012975-009A	CA-RW-21-059b-Q3	Water	7/17/2014 12:06:00 PM	7/17/2014	8/1/2014
N012975-009B	CA-RW-21-059b-Q3	Water	7/17/2014 12:06:00 PM	7/17/2014	8/1/2014
N012975-009C	CA-RW-21-059b-Q3	Water	7/17/2014 12:06:00 PM	7/17/2014	8/1/2014
N012975-010A	CA-RW-22-059b-Q3	Water	7/17/2014 12:16:00 PM	7/17/2014	8/1/2014
N012975-010B	CA-RW-22-059b-Q3	Water	7/17/2014 12:16:00 PM	7/17/2014	8/1/2014
N012975-010C	CA-RW-22-059b-Q3	Water	7/17/2014 12:16:00 PM	7/17/2014	8/1/2014
N012975-011A	CA-RW-23-059b-Q3	Water	7/17/2014 12:31:00 PM	7/17/2014	8/1/2014
N012975-011B	CA-RW-23-059b-Q3	Water	7/17/2014 12:31:00 PM	7/17/2014	8/1/2014
N012975-011C	CA-RW-23-059b-Q3	Water	7/17/2014 12:31:00 PM	7/17/2014	8/1/2014
N012975-012A	MW-931-059b-Q3	Water	7/17/2014 1:51:00 PM	7/17/2014	8/1/2014
N012975-012B	MW-931-059b-Q3	Water	7/17/2014 1:51:00 PM	7/17/2014	8/1/2014
N012975-012C	MW-931-059b-Q3	Water	7/17/2014 1:51:00 PM	7/17/2014	8/1/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012975
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012975-013A	SA-RW-22-059b-Q3	Water	7/17/2014 1:41:00 PM	7/17/2014	8/1/2014
N012975-013B	SA-RW-22-059b-Q3	Water	7/17/2014 1:41:00 PM	7/17/2014	8/1/2014
N012975-013C	SA-RW-22-059b-Q3	Water	7/17/2014 1:41:00 PM	7/17/2014	8/1/2014
N012975-014A	SA-RW-23-059b-Q3	Water	7/17/2014 1:56:00 PM	7/17/2014	8/1/2014
N012975-014B	SA-RW-23-059b-Q3	Water	7/17/2014 1:56:00 PM	7/17/2014	8/1/2014
N012975-014C	SA-RW-23-059b-Q3	Water	7/17/2014 1:56:00 PM	7/17/2014	8/1/2014
N012975-015A	SA-RW-25-059b-Q3	Water	7/17/2014 2:11:00 PM	7/17/2014	8/1/2014
N012975-015B	SA-RW-25-059b-Q3	Water	7/17/2014 2:11:00 PM	7/17/2014	8/1/2014
N012975-015C	SA-RW-25-059b-Q3	Water	7/17/2014 2:11:00 PM	7/17/2014	8/1/2014
N012975-016A	SCRIA-INF-059b-Q3	Water	7/17/2014 11:31:00 AM	7/17/2014	8/1/2014
N012975-016B	SCRIA-INF-059b-Q3	Water	7/17/2014 11:31:00 AM	7/17/2014	8/1/2014
N012975-016C	SCRIA-INF-059b-Q3	Water	7/17/2014 11:31:00 AM	7/17/2014	8/1/2014
N012975-016D	SCRIA-INF-059b-Q3	Water	7/17/2014 11:31:00 AM	7/17/2014	8/1/2014
N012975-016E	SCRIA-INF-059b-Q3	Water	7/17/2014 11:31:00 AM	7/17/2014	8/1/2014



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SCRIA-INF-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 11:31:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-016

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140721D** QC Batch: **46106** PrepDate: **7/21/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 700 10 10 mg/L 1 7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46106	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: PBW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811024						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46106	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: LCSW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		970.000	10	1000	0	97.0	80	120			

Sample ID N012977-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: ZZZZZ	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811029						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3360.000	29					3414	1.60	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-001

Client Sample ID: MW-757-059b-Q3
Collection Date: 7/17/2014 12:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244						Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 01:37 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206						Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 02:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-002

Client Sample ID: PT2-MW-08-059b-Q3
Collection Date: 7/17/2014 10:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206			PrepDate			Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 03:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-003

Client Sample ID: MW-928-059b-Q3
Collection Date: 7/17/2014 9:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206			PrepDate		Analyst: RB
Hexavalent Chromium	410	0.80	10	µg/L	50	7/18/2014 03:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-09-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 9:19:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206			PrepDate			Analyst: RB
Hexavalent Chromium	400	0.80	10	µg/L	50		7/18/2014 03:54 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** PT2-MW-10-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 11:55:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-005

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140718A** QC Batch: **R94206** PrepDate Analyst: **RB**
Hexavalent Chromium 510 0.80 10 µg/L 50 7/18/2014 04:03 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** PT2-MW-11-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 1:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140718A** QC Batch: **R94206** PrepDate Analyst: **RB**
Hexavalent Chromium 140 0.32 4.0 µg/L 20 7/18/2014 04:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-007

Client Sample ID: CA-RW-16-059b-Q3
Collection Date: 7/17/2014 10:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206			PrepDate			Analyst: RB
Hexavalent Chromium	150	0.32	4.0		µg/L	20	7/18/2014 04:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-008

Client Sample ID: CA-RW-17-059b-Q3
Collection Date: 7/17/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140718A	QC Batch: R94206			PrepDate			Analyst: RB
Hexavalent Chromium	130	0.16	2.0		µg/L	10	7/18/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-RW-21-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 12:06:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140721A** QC Batch: **R94246** PrepDate Analyst: **QBM**
Hexavalent Chromium 15 0.016 0.20 µg/L 1 7/21/2014 11:25 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-RW-22-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 12:16:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-010

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140721A** QC Batch: **R94246** PrepDate Analyst: **QBM**
Hexavalent Chromium 8.9 0.016 0.20 µg/L 1 7/21/2014 11:36 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-RW-23-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 12:31:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-011

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140721A** QC Batch: **R94246** PrepDate Analyst: **QBM**
Hexavalent Chromium 140 0.32 4.0 µg/L 20 7/21/2014 12:04 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-012

Client Sample ID: MW-931-059b-Q3
Collection Date: 7/17/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246			PrepDate			Analyst: QBM
Hexavalent Chromium	280	0.80	10		µg/L	50	7/21/2014 12:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-013

Client Sample ID: SA-RW-22-059b-Q3
Collection Date: 7/17/2014 1:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246			PrepDate			Analyst: QBM
Hexavalent Chromium	270	0.32	4.0		µg/L	20	7/21/2014 12:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-014

Client Sample ID: SA-RW-23-059b-Q3
Collection Date: 7/17/2014 1:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	100	0.16	2.0		µg/L	10	7/21/2014 01:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-015

Client Sample ID: SA-RW-25-059b-Q3
Collection Date: 7/17/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246			PrepDate			Analyst: QBM
Hexavalent Chromium	120	0.16	2.0	µg/L	10	7/21/2014 01:13 PM	

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-016

Client Sample ID: SCRIA-INF-059b-Q3
Collection Date: 7/17/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	5.4	0.016	0.20		µg/L	1	7/21/2014 01:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.6	0.030	1.0		µg/L	1	7/23/2014 12:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94244	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: PBW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94244	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: LCSW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811175						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID N012964-004ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811177						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.015 0.060 0.01719 0 20

Sample ID N012964-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811178						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.212 0.060 0.2000 0.01719 97.2 90 110

Sample ID N012964-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811180						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.228 0.060 0.2000 0.03366 97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012964-006AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.03366	96.2	90	110	0.2276	0.707	20	

Sample ID N012973-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012972-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.02599	103	90	110				

Sample ID N012975-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012976-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.060	0.2000	0	99.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.264	0.060	0.2000	0.04537	109	90	110				

Sample ID N012976-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811197						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01356	102	90	110				

Sample ID N012976-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.309	0.060	0.2000	0.1141	97.4	90	110				

Sample ID N012976-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811201						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.04489	104	90	110				

Sample ID N012976-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01782	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.01986	106	90	110				

Sample ID N012976-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03928	102	90	110				

Sample ID N012976-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03385	105	90	110				

Sample ID N012976-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.02070	103	90	110				

Sample ID N012976-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01206	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94206	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: PBW	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808626						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94206	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: LCSW	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808628						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.898	0.20	5.000	0	98.0	90	110				
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Sample ID N012963-021A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808630						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.158	0.20						4.123	0.853	20	
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Sample ID N012963-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808631						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.971	0.20	5.000	4.123	97.0	90	110				
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Sample ID N012963-021A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808632						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.103	0.20	5.000	4.123	99.6	90	110	8.971	1.46	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012963-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808634						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110
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Sample ID N012963-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808636						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.024	0.20	1.000	0	102	90	110
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Sample ID N012963-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808640						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.944	0.20	1.000	0	94.4	90	110
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Sample ID N012963-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808642						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.987	0.20	1.000	0.02520	96.2	90	110
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Sample ID N012963-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.611	0.20	5.000	3.746	97.3	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012963-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.069	0.20	5.000	2.096	99.5	90	110				

Sample ID N012963-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808652						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.814	0.20	5.000	1.807	100	90	110				

Sample ID N012963-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808654						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.581	0.20	5.000	0.5900	99.8	90	110				

Sample ID N012963-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808656						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.496	0.20	1.000	1.519	97.7	90	110				

Sample ID N012973-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012975-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6	Analysis Date: 7/18/2014	SeqNo: 1808660							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.997	0.20	1.000	0	99.7	90	110				

Sample ID N012975-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94206						
Client ID: ZZZZZZ	Batch ID: R94206	TestNo: EPA 218.6	Analysis Date: 7/18/2014	SeqNo: 1808664							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0.06130	99.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012975-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.513	0.20	5.000	5.446	101	90	110				

Sample ID N012963-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0.02570	98.3	90	110				

Sample ID N012977-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.885	0.20	1.000	1.908	97.7	90	110				

Sample ID N012977-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.918	0.20	1.000	1.930	98.8	90	110				

Sample ID N012977-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.687	0.20	5.000	7.592	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012977-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.226	0.20	5.000	3.214	100	90	110				

Sample ID N012977-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811378						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.205	0.20	5.000	7.134	101	90	110				

Sample ID N012992-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811382						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46102	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261						
Client ID: PBW	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46102	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261						
Client ID: LCSW	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.490 1.0 10.00 0 94.9 85 115

Sample ID N012975-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261						
Client ID: ZZZZZZ	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.151 1.0 10.00 2.032 91.2 75 125

Sample ID N012975-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261						
Client ID: ZZZZZZ	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.141 1.0 10.00 2.032 91.1 75 125 11.15 0.0882 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-007

Client Sample ID: CA-RW-16-059b-Q3
Collection Date: 7/17/2014 10:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/18/2014 06:21 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	210	0.66	10		mg/L	20	7/18/2014 07:49 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	7.4	0.051	0.50		mg/L	10	7/18/2014 11:08 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-008

Client Sample ID: CA-RW-17-059b-Q3
Collection Date: 7/17/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	180	0.66	10		mg/L	20	7/18/2014 08:02 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	4.3	0.026	0.25		mg/L	5	7/18/2014 11:21 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-009

Client Sample ID: CA-RW-21-059b-Q3
Collection Date: 7/17/2014 12:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/18/2014 08:40 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	8.2	0.051	0.50		mg/L	10	7/18/2014 11:33 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-010

Client Sample ID: CA-RW-22-059b-Q3
Collection Date: 7/17/2014 12:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/18/2014 08:53 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	10	0.051	0.50		mg/L	10	7/18/2014 11:46 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-011

Client Sample ID: CA-RW-23-059b-Q3
Collection Date: 7/17/2014 12:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/18/2014 09:05 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	6.8	0.026	0.25		mg/L	5	7/18/2014 11:59 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-012

Client Sample ID: MW-931-059b-Q3
Collection Date: 7/17/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212						Analyst: PS
Sulfate	86	0.33	5.0		mg/L	10	7/18/2014 09:18 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211						Analyst: PS
Nitrate as N	2.4	0.010	0.10		mg/L	2	7/18/2014 05:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-013

Client Sample ID: SA-RW-22-059b-Q3
Collection Date: 7/17/2014 1:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	85	0.33	5.0		mg/L	10	7/18/2014 09:30 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	2.3	0.010	0.10		mg/L	2	7/18/2014 05:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-014

Client Sample ID: SA-RW-23-059b-Q3
Collection Date: 7/17/2014 1:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Sulfate	58	0.33	5.0		mg/L	10	7/18/2014 09:43 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	0.89	0.0051	0.050		mg/L	1	7/18/2014 01:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-015

Client Sample ID: SA-RW-25-059b-Q3
Collection Date: 7/17/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212						Analyst: PS
Sulfate	120	0.33	5.0		mg/L	10	7/18/2014 09:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211						Analyst: PS
Nitrate as N	9.0	0.051	0.50		mg/L	10	7/18/2014 01:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-016

Client Sample ID: SCRIA-INF-059b-Q3
Collection Date: 7/17/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212						Analyst: PS
Sulfate	160	1.6	25		mg/L	50	7/18/2014 10:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211						Analyst: PS
Nitrate as N	5.5	0.051	0.50		mg/L	10	7/18/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
MB-R94212_PO4	MBLK	300_W_PO4P	mg/L		94212						
Client ID: PBW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809432						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	ND	0.10									
LCS-R94212_PO4	LCS	300_W_PO4P	mg/L		94212						
Client ID: LCSW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809435						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	2.560	0.10	2.500	0	102	90	110				
N012975-007C-DUP	DUP	300_W_PO4P	mg/L		94212						
Client ID: ZZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809440						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	ND	0.10						0	0	20	
N012975-007C-MS	MS	300_W_PO4P	mg/L		94212						
Client ID: ZZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809441						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	3.150	0.10	2.500	0	126	80	120				S
N012975-007C-MSD	MSD	300_W_PO4P	mg/L		94212						
Client ID: ZZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809442						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	3.198	0.10	2.500	0	128	80	120	3.150	1.51	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012975-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.590	0.50	10.00	7.380	102	80	120	17.76	0.962	20	

Sample ID N012975-009C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	18.100	0.50	10.00	8.230	98.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-016

Client Sample ID: SCRIA-INF-059b-Q3
Collection Date: 7/17/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate		Analyst: PS
Organic Carbon, Total	1.1	0.041	1.0	mg/L	1	7/19/2014 09:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94219	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: PBW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94219	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: LCSW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.696 1.0 10.00 0 107 85 115

Sample ID N012965-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.539 1.0 10.00 0.1124 104 75 125

Sample ID N012965-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.365 1.0 10.00 0.1124 103 75 125 10.54 1.67 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-002

Client Sample ID: PT2-MW-08-059b-Q3
Collection Date: 7/17/2014 10:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI	
Iron	0.72	0.0013	0.020	mg/L	1	7/21/2014 06:11 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
 Lab Order: N012975
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012975-003

Client Sample ID: MW-928-059b-Q3
 Collection Date: 7/17/2014 9:20:00 AM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 06:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-09-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 9:19:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103	PrepDate: 7/19/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 06:21 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-10-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 11:55:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103	PrepDate: 7/19/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 06:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-11-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 1:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103	PrepDate: 7/19/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 06:41 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-RW-16-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 10:56:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103	PrepDate: 7/19/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 06:46 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-RW-17-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 11:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-008

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140721B** QC Batch: **46103** PrepDate: **7/19/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 7/21/2014 06:52 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-RW-21-059b-Q3
Lab Order: N012975 **Collection Date:** 7/17/2014 12:06:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N012975-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140721B** QC Batch: **46103** PrepDate: **7/19/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 7/21/2014 06:57 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-010

Client Sample ID: CA-RW-22-059b-Q3
Collection Date: 7/17/2014 12:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 07:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-RW-23-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 12:31:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103	PrepDate: 7/19/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 07:06 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-012

Client Sample ID: MW-931-059b-Q3
Collection Date: 7/17/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 07:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-013

Client Sample ID: SA-RW-22-059b-Q3
Collection Date: 7/17/2014 1:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 07:14 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
 Lab Order: N012975
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012975-014

Client Sample ID: SA-RW-23-059b-Q3
 Collection Date: 7/17/2014 1:56:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 07:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
 Lab Order: N012975
 Project: PGE Hinkley, 492581.UR.IR.FW
 Lab ID: N012975-015

Client Sample ID: SA-RW-25-059b-Q3
 Collection Date: 7/17/2014 2:11:00 PM
 Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 07:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-016

Client Sample ID: SCRIA-INF-059b-Q3
Collection Date: 7/17/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46103			PrepDate	7/19/2014	Analyst: CEI
Iron	0.069	0.0013	0.020	mg/L	1	7/21/2014 07:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46103	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: PBW	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810795
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.005	0.020			

Sample ID LCS-46103	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: LCSW	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810796
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.095	0.020	0.1000	0	95.0 85 115

Sample ID N012974-001A-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: ZZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810800
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.247	0.020	0.1000	0.1445	103 75 125

Sample ID N012974-001A-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/19/2014	RunNo: 94232
Client ID: ZZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810801
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.245	0.020	0.1000	0.1445	100 75 125 0.2470 0.970 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-08-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 10:35:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	5.7	0.027	0.10		µg/L	1 7/23/2014 10:45 AM
Manganese	1400	0.64	12		µg/L	25 7/23/2014 12:52 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-003

Client Sample ID: MW-928-059b-Q3
Collection Date: 7/17/2014 9:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	0.68	0.027	0.10	µg/L	1	7/23/2014 11:12 AM
Manganese	65	0.026	0.50	µg/L	1	7/23/2014 11:12 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-004

Client Sample ID: PT2-MW-09-059b-Q3
Collection Date: 7/17/2014 9:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	0.70	0.027	0.10	µg/L	1	7/23/2014 11:18 AM
Manganese	69	0.026	0.50	µg/L	1	7/23/2014 11:18 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-005

Client Sample ID: PT2-MW-10-059b-Q3
Collection Date: 7/17/2014 11:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/23/2014 11:24 AM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 11:24 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: PT2-MW-11-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 1:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014		Analyst: CEI
Arsenic	0.61	0.027	0.10		µg/L	1	7/23/2014 11:29 AM
Manganese	47	0.026	0.50		µg/L	1	7/23/2014 11:29 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-RW-16-059b-Q3
Lab Order: N012975	Collection Date: 7/17/2014 10:56:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012975-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014		Analyst: CEI
Arsenic	0.55	0.027	0.10		µg/L	1	7/23/2014 11:46 AM
Manganese	ND	0.026	0.50		µg/L	1	7/23/2014 11:46 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-008

Client Sample ID: CA-RW-17-059b-Q3
Collection Date: 7/17/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	0.80	0.027	0.10	µg/L	1	7/23/2014 11:51 AM
Manganese	600	0.13	2.5	µg/L	5	7/23/2014 01:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-009

Client Sample ID: CA-RW-21-059b-Q3
Collection Date: 7/17/2014 12:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.0	0.027	0.10	µg/L	1	7/23/2014 11:57 AM
Manganese	0.95	0.026	0.50	µg/L	1	7/23/2014 11:57 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-010

Client Sample ID: CA-RW-22-059b-Q3
Collection Date: 7/17/2014 12:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.4	0.027	0.10	µg/L	1	7/23/2014 12:02 PM
Manganese	1.3	0.026	0.50	µg/L	1	7/23/2014 12:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-011

Client Sample ID: CA-RW-23-059b-Q3
Collection Date: 7/17/2014 12:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI	
Arsenic	4.2	0.027	0.10		µg/L	1	7/23/2014 12:08 PM
Manganese	ND	0.026	0.50		µg/L	1	7/23/2014 12:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-012

Client Sample ID: MW-931-059b-Q3
Collection Date: 7/17/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/23/2014 12:13 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 12:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-013

Client Sample ID: SA-RW-22-059b-Q3
Collection Date: 7/17/2014 1:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/23/2014 12:19 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 12:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-014

Client Sample ID: SA-RW-23-059b-Q3
Collection Date: 7/17/2014 1:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.9	0.027	0.10	µg/L	1	7/23/2014 12:25 PM
Manganese	92	0.026	0.50	µg/L	1	7/23/2014 12:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-015

Client Sample ID: SA-RW-25-059b-Q3
Collection Date: 7/17/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10	µg/L	1	7/23/2014 12:30 PM
Manganese	3.5	0.026	0.50	µg/L	1	7/23/2014 12:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 01-Aug-14

CLIENT: CH2M HILL
Lab Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012975-016

Client Sample ID: SCRIA-INF-059b-Q3
Collection Date: 7/17/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723A	QC Batch: 46102			PrepDate	7/19/2014	Analyst: CEI
Arsenic	11	0.027	0.10	µg/L	1	7/23/2014 12:36 PM
Manganese	140	0.026	0.50	µg/L	1	7/23/2014 12:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46102	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261
Client ID: PBW	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/23/2014	SeqNo: 1812039
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46102	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261
Client ID: LCSW	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/23/2014	SeqNo: 1812042
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	9.956	0.10	10.00	0	99.6 85 115
Manganese	98.585	0.50	100.0	0	98.6 85 115

Sample ID N012975-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/23/2014	SeqNo: 1812046
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	15.479	0.10	10.00	5.664	98.2 75 125

Sample ID N012975-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/23/2014	SeqNo: 1812047
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	15.443	0.10	10.00	5.664	97.8 75 125 15.48 0.231 20

Sample ID N012975-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/23/2014	SeqNo: 1812069
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Manganese	1378.534	12	100.0	1392	-13.8 75 125 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID N012975-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94261						
Client ID: ZZZZZZ	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812070						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1373.348	12	100.0	1392	-18.9	75	125	1379	0.377	20	S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C	500 ml Poly HNO3, 4°C	500 ml Poly HNO3, 4°C	500 ml Poly HNO3, 4°C	1000ml Poly 4°C	1000ml Poly 4°C	1000ml Poly 4°C	3X40 ml VOA H2SO4, 4°C	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	Preservatives:	Filtered:	Holding Time (days):								
MW-757-059b-Q3	7/17/14	1220	Water		Field	28	28	2	2	7	28	1	PM	
PT2-MW-08-059b-Q3	7/17/14	1035	Water	X	Field	180	180					2	PM	
MW-928-059b-Q3	7/17/14	0920	Water	X	Field	180	180					2	PM	
PT2-MW-09-059b-Q3	7/17/14	0919	Water	X	Field	180	180					2	PM	
PT2-MW-10-059b-Q3	7/17/14	1155	Water	X	Field	180	180					2	PM	
PT2-MW-11-059b-Q3	7/17/14	1311	Water	X	Field	180	180					2	PM	
CA-EX-04-059b-Q3			Water									1		
CA-EX-02-059b-Q3			Water									1		
CA-RW-16-059b-Q3	7/17/14	1056	Water	X				X	X			3	TH	
CA-RW-17-059b-Q3	7/17/14	1151	Water	X				X	X			3	TH	
CA-RW-21-059b-Q3	7/17/14	1206	Water	X				X	X			3	TH	
CA-RW-22-059b-Q3	7/17/14	1216	Water	X				X	X			3	TH	
CA-RW-23-059b-Q3	7/17/14	1231	Water	X				X	X			3	TH	
MW-931-059b-Q3	7/17/14	1351	Water	X				X	X			3	TH	
SA-RW-22-059b-Q3	7/17/14	1341	Water	X				X	X			3	TH	
SA-RW-23-059b-Q3	7/17/14	1356	Water	X				X	X			3	TH	
SA-RW-25-059b-Q3	7/17/14	1411	Water	X				X	X			3	TH	

NO12975-1

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Signatures Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7/17/14 1645 7/17/14 1656 7/17/14 1650 7/17/14 1650 7/17/14 1650 7/17/14 1650	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> / no 3.9C / 3.1C Airbill No: <i>[Signature]</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	Special Instructions:
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/17/2014 Workorder: N012975
 Rep sample Temp (Deg C): 3.9/3.1/3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC Al Cortes 07/18/2014

Reviewed By:

ggg 07/21/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012975-016D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.8702-63.7999)*1000000}{100}$$

703 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 700 \text{ mg/L}$$


7/23/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/21/2014								TDS/CONDUCTIVITY
Date Finished: 7/22/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46106	100	64.1088	64.1091	3	1	3.00		
LCS-46106	100	63.5089	63.6059	970	1	970.00		
N012974-001C	100	63.3747	63.4042	295	1	295.00	390	0.76
N012975-016D	100	63.7999	63.8702	703	1	703.00	988	0.71
N012977-001D	35	63.9748	64.0943	1195	2.8571429	3414.29	4040	0.85
N012977-001D-DUP	35	63.9959	64.1135	1176	2.8571429	3360.00	4040	0.83
N012977-002D	35	62.9967	63.1105	1138	2.8571429	3251.43	4040	0.80
N012977-003D	100	63.7809	63.9274	1465	1	1465.00	2040	0.72
N012977-004D	100	64.2745	64.5694	2949	1	2949.00	3820	0.77
N012977-005D	100	61.3654	61.4955	1301	1	1301.00	1840	0.71
N012977-006D	100	60.6371	60.7374	1003	1	1003.00	1633	0.61
N012977-007D	100	61.7311	61.8371	1060	1	1060.00	1607	0.66
N012977-008D	100	60.8359	60.9544	1185	1	1185.00	1732	0.68
N012977-009C	70	61.1351	61.2455	1104	1.4285714	1577.14	2130	0.74
N012977-010C	65	64.2554	64.3676	1122	1.5384615	1726.15	2320	0.74
N012977-011D	100	61.6737	61.7962	1225	1	1225.00	1739	0.70
N012990-007C	100	60.5348	60.6313	965	1	965.00	1466	0.66
N012990-014E	100	60.7711	60.8051	340	1	340.00	487	0.70

JML
7/23/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012975-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012975-005A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 10.2172 * 50 \\ &= 510.86\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 510$$

 7/31/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012975-007C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.738 * 10 \\ &= 7.38 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 7.4$$

 8/1/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012975-016E**

The concentration in mg/L is calculated as follows:


$$\text{TOC} = [1.14470] [1] - 0.08490$$

$$\text{TOC} = 1.05980$$

Reporting results in two significant figures,

$$\text{TOC} = 1.10 \text{ mg/L}$$

PS 7/30/2014

 8/1/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012975-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.7203352771 * 1 * (25/25) \\ &= 0.7203352771 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.72$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012975
Test Method: EPA 6010
Analysis Date: 7/21/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46103

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012974-001A-DT 5X	Iron	mg/L	0.152296518	NA	0.144528594	5.37%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012974-001A-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94232						
Client ID: ZZZZZ	Batch ID: 46103	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/21/2014	SeqNo: 1810799							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	5.222	0.040	5.000	0.1445	102	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012975-016B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 5.5664441632 * 1 * (25/25) \\ &= 5.5664441632 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 5.6$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012975
Test Method: EPA 6020
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46102

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012975-002B-DT 5X	Chromium	µg/L	2.093592944	NA	2.03166503	3.05%	10
N012975-002B-DT 5X	Arsenic	µg/L	5.649383384	PASS	5.663644765	0.25%	10
N012975-002B-DT 125X	Manganese	µg/L	1426.443461	PASS	1392.286907	2.45%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012975-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94261						
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812012							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.537	2.0	20.00	2.032	87.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012975
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012975-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94261						
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.346	0.20	20.00	5.664	93.4	80	120				

Sample ID: N012975-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94261						
Client ID: ZZZZZ	Batch ID: 46102	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812068						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	3807.248	12	2500	1392	96.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

July 31, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012976

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012976

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Dilution was necessary on N012976-006 for Orthophosphate, Dissolved (as P) due to precipitation of sample upon the addition of eluent.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (5.467 ug/L) and hexavalent chromium (2.658 ug/L) for sample N012976-009 (MW-185S2-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 5.055 and 4.652 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (5.3 ug/L) and hexavalent chromium (2.355 ug/L) for sample N012976-010 (MW-991-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 5.052 and 4.533 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (2.614 ug/L) and hexavalent chromium (1.46 ug/L) for sample N012976-019 (MW-195S3-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012976

CASE NARRATIVE

chromium. The results from the redigested samples were 2.312 and 2.145 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (3.739 ug/L) and hexavalent chromium (2.709 ug/L) for sample N012976-032 (MW-188S2-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.445 and 3.328 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 31-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012976
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012976-001A	MW-21B-059-Q3	Water	7/17/2014 1:02:00 PM	7/17/2014	7/31/2014
N012976-001B	MW-21B-059-Q3	Water	7/17/2014 1:02:00 PM	7/17/2014	7/31/2014
N012976-001C	MW-21B-059-Q3	Water	7/17/2014 1:02:00 PM	7/17/2014	7/31/2014
N012976-002A	MW-21C-059-Q3	Water	7/17/2014 12:27:00 PM	7/17/2014	7/31/2014
N012976-002B	MW-21C-059-Q3	Water	7/17/2014 12:27:00 PM	7/17/2014	7/31/2014
N012976-003A	MW-30B1-059-Q3	Water	7/17/2014 8:53:00 AM	7/17/2014	7/31/2014
N012976-003B	MW-30B1-059-Q3	Water	7/17/2014 8:53:00 AM	7/17/2014	7/31/2014
N012976-004A	MW-30B2-059-Q3	Water	7/17/2014 10:20:00 AM	7/17/2014	7/31/2014
N012976-004B	MW-30B2-059-Q3	Water	7/17/2014 10:20:00 AM	7/17/2014	7/31/2014
N012976-005A	MW-31C-059-Q3	Water	7/17/2014 3:05:00 PM	7/17/2014	7/31/2014
N012976-005B	MW-31C-059-Q3	Water	7/17/2014 3:05:00 PM	7/17/2014	7/31/2014
N012976-006A	MW-43-059-Q3	Water	7/17/2014 2:58:00 PM	7/17/2014	7/31/2014
N012976-006B	MW-43-059-Q3	Water	7/17/2014 2:58:00 PM	7/17/2014	7/31/2014
N012976-006C	MW-43-059-Q3	Water	7/17/2014 2:58:00 PM	7/17/2014	7/31/2014
N012976-007A	MW-849-059-Q3	Water	7/17/2014 3:20:00 PM	7/17/2014	7/31/2014
N012976-008A	MW-185S1-059-Q3	Water	7/17/2014 9:43:00 AM	7/17/2014	7/31/2014
N012976-008B	MW-185S1-059-Q3	Water	7/17/2014 9:43:00 AM	7/17/2014	7/31/2014
N012976-009A	MW-185S2-059-Q3	Water	7/17/2014 10:17:00 AM	7/17/2014	7/31/2014
N012976-009B	MW-185S2-059-Q3	Water	7/17/2014 10:17:00 AM	7/17/2014	7/31/2014
N012976-010A	MW-991-059-Q3	Water	7/17/2014 10:27:00 AM	7/17/2014	7/31/2014
N012976-010B	MW-991-059-Q3	Water	7/17/2014 10:27:00 AM	7/17/2014	7/31/2014
N012976-011A	MW-185S3-059-Q3	Water	7/17/2014 10:57:00 AM	7/17/2014	7/31/2014
N012976-011B	MW-185S3-059-Q3	Water	7/17/2014 10:57:00 AM	7/17/2014	7/31/2014
N012976-012A	MW-194S1-059-Q3	Water	7/17/2014 1:18:00 PM	7/17/2014	7/31/2014
N012976-012B	MW-194S1-059-Q3	Water	7/17/2014 1:18:00 PM	7/17/2014	7/31/2014
N012976-013A	MW-194S2-059-Q3	Water	7/17/2014 12:21:00 PM	7/17/2014	7/31/2014
N012976-013B	MW-194S2-059-Q3	Water	7/17/2014 12:21:00 PM	7/17/2014	7/31/2014
N012976-014A	MW-194S3-059-Q3	Water	7/17/2014 2:29:00 PM	7/17/2014	7/31/2014
N012976-014B	MW-194S3-059-Q3	Water	7/17/2014 2:29:00 PM	7/17/2014	7/31/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012976
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012976-015A	MW-846-059-Q3	Water	7/17/2014 3:19:00 PM	7/17/2014	7/31/2014
N012976-016A	MW-195S1-059-Q3	Water	7/17/2014 12:55:00 PM	7/17/2014	7/31/2014
N012976-016B	MW-195S1-059-Q3	Water	7/17/2014 12:55:00 PM	7/17/2014	7/31/2014
N012976-017A	MW-993-059-Q3	Water	7/17/2014 1:00:00 PM	7/17/2014	7/31/2014
N012976-017B	MW-993-059-Q3	Water	7/17/2014 1:00:00 PM	7/17/2014	7/31/2014
N012976-018A	MW-195S2-059-Q3	Water	7/17/2014 12:08:00 PM	7/17/2014	7/31/2014
N012976-018B	MW-195S2-059-Q3	Water	7/17/2014 12:08:00 PM	7/17/2014	7/31/2014
N012976-019A	MW-195S3-059-Q3	Water	7/17/2014 11:23:00 AM	7/17/2014	7/31/2014
N012976-019B	MW-195S3-059-Q3	Water	7/17/2014 11:23:00 AM	7/17/2014	7/31/2014
N012976-020A	MW-197S1-059-Q3	Water	7/17/2014 10:04:00 AM	7/17/2014	7/31/2014
N012976-020B	MW-197S1-059-Q3	Water	7/17/2014 10:04:00 AM	7/17/2014	7/31/2014
N012976-021A	MW-197S2-059-Q3	Water	7/17/2014 9:39:00 AM	7/17/2014	7/31/2014
N012976-021B	MW-197S2-059-Q3	Water	7/17/2014 9:39:00 AM	7/17/2014	7/31/2014
N012976-022A	MW-197S3-059-Q3	Water	7/17/2014 8:42:00 AM	7/17/2014	7/31/2014
N012976-022B	MW-197S3-059-Q3	Water	7/17/2014 8:42:00 AM	7/17/2014	7/31/2014
N012976-023A	MW-994-059-Q3	Water	7/17/2014 8:50:00 AM	7/17/2014	7/31/2014
N012976-023B	MW-994-059-Q3	Water	7/17/2014 8:50:00 AM	7/17/2014	7/31/2014
N012976-024A	MW-848-059-Q3	Water	7/17/2014 3:15:00 PM	7/17/2014	7/31/2014
N012976-025A	MW-161S1-059-Q3	Water	7/17/2014 10:32:00 AM	7/17/2014	7/31/2014
N012976-025B	MW-161S1-059-Q3	Water	7/17/2014 10:32:00 AM	7/17/2014	7/31/2014
N012976-026A	MW-161S2-059-Q3	Water	7/17/2014 9:51:00 AM	7/17/2014	7/31/2014
N012976-026B	MW-161S2-059-Q3	Water	7/17/2014 9:51:00 AM	7/17/2014	7/31/2014
N012976-027A	MW-161S3-059-Q3	Water	7/17/2014 9:03:00 AM	7/17/2014	7/31/2014
N012976-027B	MW-161S3-059-Q3	Water	7/17/2014 9:03:00 AM	7/17/2014	7/31/2014
N012976-028A	MW-162S1-059-Q3	Water	7/17/2014 2:04:00 PM	7/17/2014	7/31/2014
N012976-028B	MW-162S1-059-Q3	Water	7/17/2014 2:04:00 PM	7/17/2014	7/31/2014
N012976-029A	MW-162S2-059-Q3	Water	7/17/2014 12:41:00 PM	7/17/2014	7/31/2014
N012976-029B	MW-162S2-059-Q3	Water	7/17/2014 12:41:00 PM	7/17/2014	7/31/2014
N012976-030A	MW-205S1-059-Q3	Water	7/17/2014 2:42:00 PM	7/17/2014	7/31/2014
N012976-030B	MW-205S1-059-Q3	Water	7/17/2014 2:42:00 PM	7/17/2014	7/31/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012976
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012976-031A	MW-847-059-Q3	Water	7/17/2014 4:20:00 PM	7/17/2014	7/31/2014
N012976-032A	MW-188S2-059-Q3	Water	7/17/2014 8:05:00 AM	7/17/2014	7/31/2014
N012976-032B	MW-188S2-059-Q3	Water	7/17/2014 8:05:00 AM	7/17/2014	7/31/2014



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-21B-059-Q3
Lab Order: N012976	Collection Date: 7/17/2014 1:02:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N012976-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC (LOW LEVEL)							
EPA 218.6							
RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 02:19 PM
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 08:45 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A				EPA 6020			
RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 08:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-002

Client Sample ID: MW-21C-059-Q3
Collection Date: 7/17/2014 12:27:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 02:40 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 08:56 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 08:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-003

Client Sample ID: MW-30B1-059-Q3
Collection Date: 7/17/2014 8:53:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	3.0	0.016	0.20		µg/L	1	7/18/2014 09:06 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.5	0.030	1.0		µg/L	1	7/22/2014 08:58 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-004

Client Sample ID: MW-30B2-059-Q3
Collection Date: 7/17/2014 10:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	12	0.016	0.20		µg/L	1	7/18/2014 09:16 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	13	0.030	1.0		µg/L	1	7/22/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-005

Client Sample ID: MW-31C-059-Q3
Collection Date: 7/17/2014 3:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/19/2014 11:54 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/22/2014 09:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-006

Client Sample ID: MW-43-059-Q3
Collection Date: 7/17/2014 2:58:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	10	0.016	0.20		µg/L	1	7/18/2014 10:46 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	11	0.030	1.0		µg/L	1	7/22/2014 09:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-007

Client Sample ID: MW-849-059-Q3
Collection Date: 7/17/2014 3:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 03:44 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/18/2014 11:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-008

Client Sample ID: MW-185S1-059-Q3
Collection Date: 7/17/2014 9:43:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	8.4	0.016	0.20		µg/L	1	7/18/2014 11:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	9.2	0.030	1.0		µg/L	1	7/22/2014 09:20 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-009

Client Sample ID: MW-185S2-059-Q3
Collection Date: 7/17/2014 10:17:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/19/2014 12:05 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.5	0.030	1.0		µg/L	1	7/22/2014 09:25 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-010

Client Sample ID: MW-991-059-Q3
Collection Date: 7/17/2014 10:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	7/19/2014 12:25 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.3	0.030	1.0		µg/L	1	7/22/2014 09:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-011

Client Sample ID: MW-185S3-059-Q3
Collection Date: 7/17/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/19/2014 12:45 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	4.9	0.030	1.0		µg/L	1	7/22/2014 09:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-012

Client Sample ID: MW-194S1-059-Q3
Collection Date: 7/17/2014 1:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	6.3	0.016	0.20		µg/L	1	7/19/2014 01:05 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	6.5	0.030	1.0		µg/L	1	7/22/2014 09:42 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-013

Client Sample ID: MW-194S2-059-Q3
Collection Date: 7/17/2014 12:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	0.11	0.012	0.060		µg/L	1	7/21/2014 04:05 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 12:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 09:59 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-014

Client Sample ID: MW-194S3-059-Q3
Collection Date: 7/17/2014 2:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 04:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 02:05 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 10:04 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-015

Client Sample ID: MW-846-059-Q3
Collection Date: 7/17/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 04:47 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 12:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-016

Client Sample ID: MW-195S1-059-Q3
Collection Date: 7/17/2014 12:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140718B	QC Batch: R94204				PrepDate		Analyst: RB
Hexavalent Chromium	4.7	0.016	0.20		µg/L	1	7/19/2014 02:45 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.3	0.030	1.0		µg/L	1	7/22/2014 10:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-017

Client Sample ID: MW-993-059-Q3
Collection Date: 7/17/2014 1:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	4.7	0.016	0.20		µg/L	1	7/19/2014 01:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.3	0.030	1.0		µg/L	1	7/22/2014 10:16 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-018

Client Sample ID: MW-195S2-059-Q3
Collection Date: 7/17/2014 12:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/19/2014 01:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.0	0.030	1.0		µg/L	1	7/22/2014 10:21 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-019

Client Sample ID: MW-195S3-059-Q3
Collection Date: 7/17/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/19/2014 02:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	2.6	0.030	1.0		µg/L	1	7/22/2014 10:27 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-020

Client Sample ID: MW-197S1-059-Q3
Collection Date: 7/17/2014 10:04:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	0.72	0.016	0.20		µg/L	1	7/19/2014 02:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 10:33 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-021

Client Sample ID: MW-197S2-059-Q3
Collection Date: 7/17/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 05:07 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 02:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46100				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 10:38 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-022

Client Sample ID: MW-197S3-059-Q3
Collection Date: 7/17/2014 8:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 05:49 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 03:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 11:06 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-023

Client Sample ID: MW-994-059-Q3
Collection Date: 7/17/2014 8:50:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 06:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 03:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 11:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-024

Client Sample ID: MW-848-059-Q3
Collection Date: 7/17/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 06:31 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 04:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-025

Client Sample ID: MW-161S1-059-Q3
Collection Date: 7/17/2014 10:32:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/19/2014 04:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.7	0.030	1.0		µg/L	1	7/22/2014 11:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-026

Client Sample ID: MW-161S2-059-Q3
Collection Date: 7/17/2014 9:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/19/2014 04:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	7/22/2014 11:46 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-027

Client Sample ID: MW-161S3-059-Q3
Collection Date: 7/17/2014 9:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/19/2014 05:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/22/2014 11:51 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-028

Client Sample ID: MW-162S1-059-Q3
Collection Date: 7/17/2014 2:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/19/2014 06:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	5.0	0.030	1.0		µg/L	1	7/22/2014 11:57 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-029

Client Sample ID: MW-162S2-059-Q3
Collection Date: 7/17/2014 12:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	0.48	0.016	0.20		µg/L	1	7/19/2014 06:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/22/2014 12:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-030

Client Sample ID: MW-205S1-059-Q3
Collection Date: 7/17/2014 2:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	3.0	0.016	0.20		µg/L	1	7/19/2014 06:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	7/22/2014 12:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-031

Client Sample ID: MW-847-059-Q3
Collection Date: 7/17/2014 4:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140721A	QC Batch: R94244				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/21/2014 06:51 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 07:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012976-032

Client Sample ID: MW-188S2-059-Q3
Collection Date: 7/17/2014 8:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140719A	QC Batch: R94229				PrepDate		Analyst: RB
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/19/2014 07:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.7	0.030	1.0		µg/L	1	7/22/2014 12:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94244	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: PBW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811174						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94244	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: LCSW	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811175						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.204 0.060 0.2000 0 102 90 110

Sample ID N012964-004ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811177						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.015 0.060 0.01719 0 20

Sample ID N012964-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811178						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.212 0.060 0.2000 0.01719 97.2 90 110

Sample ID N012964-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811180						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.228 0.060 0.2000 0.03366 97.0 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012964-006AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811181						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.03366	96.2	90	110	0.2276	0.707	20	

Sample ID N012973-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012972-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.02599	103	90	110				

Sample ID N012975-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811189						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0	108	90	110				

Sample ID N012976-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811191						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.060	0.2000	0	99.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.264	0.060	0.2000	0.04537	109	90	110				

Sample ID N012976-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811197						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01356	102	90	110				

Sample ID N012976-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811199						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.309	0.060	0.2000	0.1141	97.4	90	110				

Sample ID N012976-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811201						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.252	0.060	0.2000	0.04489	104	90	110				

Sample ID N012976-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811203						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01782	95.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012976-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811205						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.233	0.060	0.2000	0.01986	106	90	110				

Sample ID N012976-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03928	102	90	110				

Sample ID N012976-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811211						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.244	0.060	0.2000	0.03385	105	90	110				

Sample ID N012976-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.02070	103	90	110				

Sample ID N012976-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94244						
Client ID: ZZZZZZ	Batch ID: R94244	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811215						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.225	0.060	0.2000	0.01206	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94204	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: PBW	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808463						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94204	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: LCSW	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808464						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.952	0.20	5.000	0	99.0	90	110				
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Sample ID N012968-018A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808466						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.858	0.20						0.8507	0.808	20	
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Sample ID N012968-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.919	0.20	1.000	0.8507	107	90	110				
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Sample ID N012968-018A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808468						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.914	0.20	1.000	0.8507	106	90	110	1.918	0.214	20	
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012972-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.094	0.20	1.000	0.06030	103	90	110				

Sample ID N012976-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.040	0.20	1.000	0	104	90	110				

Sample ID N012976-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0.06990	98.3	90	110				

Sample ID N012976-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.096	0.20	5.000	2.995	102	90	110				

Sample ID N012976-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808488						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.032	0.20	1.000	0	103	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/18/2014	SeqNo: 1808492						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	13.382	0.20	5.000	8.448	98.7	90	110
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Sample ID N012976-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808494						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.755	0.20	5.000	2.658	102	90	110
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Sample ID N012976-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808496						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.392	0.20	1.000	2.355	104	90	110
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Sample ID N012976-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.471	0.20	5.000	4.426	101	90	110
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Sample ID N012976-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1808500						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	11.289	0.20	5.000	6.270	100	90	110
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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1808504							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.090	0.20	1.000	0.07630	101	90	110				

Sample ID N012976-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94204						
Client ID: ZZZZZZ	Batch ID: R94204	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1808506							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.689	0.20	5.000	4.736	99.1	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94229	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: PBW	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810561						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94229	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: LCSW	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.018	0.20	5.000	0	100	90	110				
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Sample ID N012976-005A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.228	0.20						1.230	0.114	20	
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Sample ID N012976-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810565						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.210	0.20	5.000	1.230	99.6	90	110				
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Sample ID N012976-005A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.269	0.20	5.000	1.230	101	90	110	6.210	0.939	20	
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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.121	0.20	1.000	0.09590	103	90	110
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Sample ID N012976-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810570						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.039	0.20	1.000	0	104	90	110
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Sample ID N012976-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810574						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.762	0.20	5.000	4.685	102	90	110
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Sample ID N012976-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810576						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.468	0.20	5.000	4.410	101	90	110
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Sample ID N012976-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.562	0.20	5.000	1.460	102	90	110
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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810580						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.773	0.20	1.000	0.7211	105	90	110				

Sample ID N012976-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810582						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Sample ID N012976-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0.05650	99.5	90	110				

Sample ID N012976-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810588						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.051	0.20	1.000	0.05330	99.8	90	110				

Sample ID N012976-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810590						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0	106	90	110				

Qualifiers:

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|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810592						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.488	0.20	5.000	3.443	101	90	110				

Sample ID N012976-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810594						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.857	0.20	5.000	2.766	102	90	110				

Sample ID N012976-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.623	0.20	5.000	1.507	102	90	110				

Sample ID N012976-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810600						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.350	0.20	5.000	4.379	99.4	90	110				

Sample ID N012976-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.508	0.20	1.000	0.4811	103	90	110				

Qualifiers:

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|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012976-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810604							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.119	0.20	5.000	3.038	102	90	110				

Sample ID N012976-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810606							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Sample ID N012976-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94229						
Client ID: ZZZZZZ	Batch ID: R94229	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810610							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.664	0.20	5.000	2.709	99.1	90	110				

Qualifiers:

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|---|--|--|
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www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46100	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: PBW	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811059						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46100	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: LCSW	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811060						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.019 1.0 10.00 0 110 85 115

Sample ID N012973-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.642 1.0 10.00 0.07660 106 75 125

Sample ID N012973-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46100	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811065						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.593 1.0 10.00 0.07660 105 75 125 10.64 0.460 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46101	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: PBW	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46101	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: LCSW	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.249 1.0 10.00 0 112 85 115

Sample ID N012976-022B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.668 1.0 10.00 0.1655 105 75 125

Sample ID N012976-022B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811097						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.695 1.0 10.00 0.1655 105 75 125 10.67 0.257 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94212_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: PBW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P)	ND	0.10			
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Sample ID LCS-R94212_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: LCSW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809435
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P)	2.560	0.10	2.500	0	102 90 110
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Sample ID N012975-007C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809440
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P)	ND	0.10			0 0 20
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Sample ID N012975-007C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809441
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P)	3.150	0.10	2.500	0	126 80 120 S
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Sample ID N012975-007C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809442
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P)	3.198	0.10	2.500	0	128 80 120 3.150 1.51 20 S
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly 1000ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C Filtered: Field Field Field Holding Time (days): 28 180 2			Matrix: Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr Ortho-Phosphate (E300.0) FF			Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix								
MW-21B-059-Q3	7/17/14	1302	Water	X	X	X		NO12976-1	3	JM	
MW-21C-059-Q3	7/17/14	1227	Water	X	X			-2	2	JM	
MW-30B1-059-Q3	7/17/14	0853	Water	X	X			-3	2	JM	
MW-30B2-059-Q3	7/17/14	1020	Water	X	X			-4	2	JM	
MW-31C-059-Q3	7/17/14	1505	Water	X	X			-5	2	PM	
MW-43-059-Q3	7/17/14	1458	Water	X	X	X		-6	3	JM	
MW-849-059-Q3	7/17/14	1520	Water	X				-7	1	JM	
MW-185S1-059-Q3	7/17/14	0943	Water	X	X			-8	2	JD	
MW-185S2-059-Q3	7/17/14	1017	Water	X	X			-9	2	JD	
MW-991-059-Q3	7/17/14	1027	Water	X	X			-10	2	JD	
MW-185S3-059-Q3	7/17/14	1057	Water	X	X			-11	2	JD	
MW-194S1-059-Q3	7/17/14	1318	Water	X	X			-12	2	JD	
MW-194S2-059-Q3	7/17/14	1221	Water	X	X			-13	2	JD	
MW-194S3-059-Q3	7/17/14	1429	Water	X	X			-14	2	JD	
MW-846-059-Q3	7/17/14	1519	Water	X				-15	1	JD	
MW-195S1-059-Q3	7/17/14	1255	Water	X	X			-16	2	LB	
MW-993-059-Q3	7/17/14	1300	Water	X	X			-17	2	LB	

Signatures Approved by <u>K. Blinn</u> Sampled by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u>		Date/Time 7/17/14 1645 7/17/14 1646 7/17/14 1646 7/17/14 1646 7/17/14 1646 7/17/14 1646		Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes <input type="radio"/> no 3-5°C Airbill No: <u>PA2</u> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Please revise the COC as indicated below. *K. Blinn* 7/10/14

CH2MHILL

CHAIN OF CUSTODY RECORD

Project Name PGE Hinkley				Container:			Number of Containers	COMMENTS
Location Hinkley				250 ml Poly	500 ml Poly	1000ml Poly		
Project Number 492581.UR.SW.FW				Preservatives:				
Project Manager Jennifer Low				(NH4)2 SO4, NH4, OH, 4°C	HNO3, 4°C	4°C		
Sample Manager Jim Hanvey				Field	Field	Field		
Cell Number (404) 229-2181				Holding Time (days):				
Fax Number (510) 622-9136				28	180	2		
Task Order 59				Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	Ortho-Phosphate (E300.0) FF		
Project 2014-GMP-059-Q3								
Turnaround Time 10 Days								
Shipping Date:								
COC Number:								
SAMPLE ID	DATE	TIME	Matrix					
MW-195S2-059-Q3	7/17/14	1208	Water	X	X			2 LB
MW-195S3-059-Q3	7/17/14	1123	Water	X	X			2 LB
MW-197S1-059-Q3	7/17/14	1004	Water	X	X			2 LB
MW-197S2-059-Q3	7/17/14	0939	Water	X	X			2 LB
MW-197S3-059-Q3	7/17/14	0842	Water	X	X			2 LB
MW-994-059-Q3	7/17/14	0850	Water	X	X			2 LB
MW-848-059-Q3	7/17/14	1515	Water	X				1 LB
MW-161S1-059-Q3	7/17/14	1032	Water	X	X			2 SD
MW-161S2-059-Q3	7/17/14	0951	Water	X	X			2 SD
MW-161S3-059-Q3	7/17/14	0903	Water	X	X			2 SD
MW-162S1-059-Q3	7/17/14	1404	Water	X	X			2 SD
MW-162S2-059-Q3	7/17/14	1241	Water	X	X			2 SD
MW-205S1-059-Q3	7/17/14	1442	Water	X	X			2 SD
MW-847-059-Q3	7/17/14	1620	Water	X	X			2 SD
MW-188S2-059-Q3	7/17/14	0805	Water	X	X			2 SD

1012976-18
-19
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TOTAL NUMBER OF CONTAINERS | 62

Approved by <i>K. Blinn</i>	Signatures	Date/Time <i>7/17/14 1645</i>	Shipping Details	ATTN:	Special Instructions:
Sampled by <i>[Signature]</i>		<i>7/17/14 1646</i>	Method of Shipment:		
Relinquished by <i>[Signature]</i>		<i>7/17/14 1646</i>	On Ice: <input checked="" type="radio"/> yes / <input type="radio"/> no <i>2, 9, 2</i>		
Received by <i>[Signature]</i>		<i>7/17/14 1646</i>	Airbill No:		
Relinquished by <i>[Signature]</i>		<i>7/17/14 1648</i>	Lab Name: Advanced Technology Laboratories		
Received by <i>[Signature]</i>		<i>7/17/14 1648</i>	Lab Phone: (702) 307-2659		Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly 1000ml Poly	Preservatives: (NH4)2, SO4, NH4, OH, 4°C HNO3, 4°C	Filtered: Field Field Field	Holding Time (days): 28 180 2	Ortho-Phosphate (E300.0) FF Metals Dissolved (6020AFF) FF Cr	Cr(VI) (E218.0) FF	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	X	X						
MW-195S2-059-Q3	7/17/14	1208	Water	X	X				2 LB		
MW-195S3-059-Q3	7/17/14	1123	Water	X	X				2 LB		
MW-197S1-059-Q3	7/17/14	1004	Water	X	X				2 LB		
MW-197S2-059-Q3	7/17/14	0939	Water	X	X				2 LB		
MW-197S3-059-Q3	7/17/14	0842	Water	X	X				2 LB		
MW-994-059-Q3	7/17/14	0850	Water	X	X				2 LB		
MW-848-059-Q3	7/17/14	1515	Water	X					1 LB		
MW-161S1-059-Q3	7/17/14	1032	Water	X	X				2 SD		
MW-161S2-059-Q3	7/17/14	0951	Water	X	X				2 SD		
MW-161S3-059-Q3	7/17/14	0903	Water	X	X				2 SD		
MW-162S1-059-Q3	7/17/14	1404	Water	X	X				2 SD		
MW-162S2-059-Q3	7/17/14	1241	Water	X	X				2 SD		
MW-205S1-059-Q3	7/17/14	1442	Water	X	X				2 SD		
MW-847-059-Q3	7/17/14	1620	Water	X	X				2 SD		
MW-188S2-059-Q3	7/17/14	0805	Water	X	X				2 SD		

1012976-18

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TOTAL NUMBER OF CONTAINERS

62

Approved by <i>K. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/17/14 1645 7/17/14 1646 7/17/14 1646 7/19/14 1644 7/19/14 1645 7/19/14 1645	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>2, 900</i> Airbill No: <i>18#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/17/2014 Workorder: N012976
 Rep sample Temp (Deg C): 3.5/2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC Alcorta 07/18/2014

Reviewed By:

gog 07/21/14

amanda.cortes@assetlaboratories.com

From: Katherine.Blinn@ch2m.com
Sent: Friday, July 18, 2014 9:02 AM
To: amanda.cortes@assetlaboratories.com
Cc: marlon@atl-labs.com; Jim.Harvey@CH2M.com; samplecontrol.lv@assetlaboratories.com
Subject: RE: ATU-SOIL and GMP
Attachments: COC_GMP_071714_Revised.pdf

Hi Amanda,

As far as I know, the ATU-SOIL sample IDs are correct as written on the COC and on the sample containers. As for the GMP sample, MW-847-059-Q3 should only be analyzed for Cr+6. The corrected COC is attached to this email.

Please let me know if you have any other questions.

Katherine A.T. Blinn, E.I.T.

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Friday, July 18, 2014 8:49 AM
To: Blinn, Katherine/NJO
Cc: 'Marlon Cartin'; Harvey, Jim/BAO; 'ASSET, Inc. Sample Control'
Subject: ATU-SOIL and GMP

Hello, Katherine.

I have a couple of questions. Please advise on the following:

1. For ATU-SOIL, are the samples to include the "-059-Q3" at the end of the sample ID, or should it be left off as per the COC and sample containers?
2. For GMP, we received one sample "MW-847-059-Q3" that is marked for Cr+6 and Dissolved Metals on the COC. However, we only received Cr+6 and the sample table indicates that only Cr+6 is for this sample.

Please reference the attached COCs.

Thank you,

Amanda M. Cortes
Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341
California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

ASSET LABORATORIES is a full-service environmental lab providing organic and inorganic analyses of soil, water, wastewater, storm water and

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012976-013A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.114065 * 1 \\ &= 0.114065\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.11$$

 7/31/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012976-016A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 4.736 * 1 \\ &= 4.736\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 4.7$$

 7/31/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Orthophosphate concentration, in mg/L, in the original sample as follows:

$$\text{Orthophosphate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012976-001C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Orthophosphate, mg/L} &= 0.000000 * 1 \\ &= 0.000000 \end{aligned}$$

Since PQL is 0.1 mg/L,

$$\text{Orthophosphate, mg/L} = \text{ND}$$

 7/31/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012976-003B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.49706020695239 * 1 * (25/25) \\ &= 3.49706020695239 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.5$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012976
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46100

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012973-001B-DT 5X	Chromium	µg/L	0	NA	0.076604839	100.00%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012976
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46101

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012976-022B-DT 5X	Chromium	µg/L	0	NA	0.165467539	100.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012973-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46100	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811063							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.720	2.0	20.00	0.07660	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012976
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012976-022B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.304	2.0	20.00	0.1655	101	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

July 31, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012977

RE: PGE Hinkley, 492581.UR.AU.FW

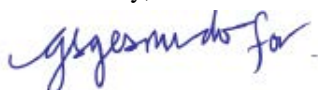
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 17, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012977

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) on QC sample N012977-004B-MS is outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Dilution was necessary on N012977-003 for Orthophosphate, Dissolved (as P) due to precipitation of sample upon the addition of eluent.



ASSET Laboratories

Date: 31-Jul-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012977
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012977-001A	MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	7/17/2014	7/31/2014
N012977-001B	MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	7/17/2014	7/31/2014
N012977-001C	MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	7/17/2014	7/31/2014
N012977-001D	MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	7/17/2014	7/31/2014
N012977-001E	MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	7/17/2014	7/31/2014
N012977-002A	MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	7/17/2014	7/31/2014
N012977-002B	MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	7/17/2014	7/31/2014
N012977-002C	MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	7/17/2014	7/31/2014
N012977-002D	MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	7/17/2014	7/31/2014
N012977-002E	MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	7/17/2014	7/31/2014
N012977-003A	MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	7/17/2014	7/31/2014
N012977-003B	MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	7/17/2014	7/31/2014
N012977-003C	MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	7/17/2014	7/31/2014
N012977-003D	MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	7/17/2014	7/31/2014
N012977-003E	MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	7/17/2014	7/31/2014
N012977-004A	MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	7/17/2014	7/31/2014
N012977-004B	MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	7/17/2014	7/31/2014
N012977-004C	MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	7/17/2014	7/31/2014
N012977-004D	MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	7/17/2014	7/31/2014
N012977-004E	MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	7/17/2014	7/31/2014
N012977-005A	IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	7/17/2014	7/31/2014
N012977-005B	IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	7/17/2014	7/31/2014
N012977-005C	IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	7/17/2014	7/31/2014
N012977-005D	IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	7/17/2014	7/31/2014
N012977-005E	IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	7/17/2014	7/31/2014
N012977-006A	IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	7/17/2014	7/31/2014
N012977-006B	IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	7/17/2014	7/31/2014
N012977-006C	IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	7/17/2014	7/31/2014
N012977-006D	IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	7/17/2014	7/31/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012977
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012977-006E	IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	7/17/2014	7/31/2014
N012977-007A	IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	7/17/2014	7/31/2014
N012977-007B	IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	7/17/2014	7/31/2014
N012977-007C	IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	7/17/2014	7/31/2014
N012977-007D	IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	7/17/2014	7/31/2014
N012977-007E	IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	7/17/2014	7/31/2014
N012977-008A	RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	7/17/2014	7/31/2014
N012977-008B	RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	7/17/2014	7/31/2014
N012977-008C	RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	7/17/2014	7/31/2014
N012977-008D	RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	7/17/2014	7/31/2014
N012977-008E	RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	7/17/2014	7/31/2014
N012977-009A	Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	7/17/2014	7/31/2014
N012977-009B	Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	7/17/2014	7/31/2014
N012977-009C	Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	7/17/2014	7/31/2014
N012977-009D	Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	7/17/2014	7/31/2014
N012977-010A	Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	7/17/2014	7/31/2014
N012977-010B	Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	7/17/2014	7/31/2014
N012977-010C	Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	7/17/2014	7/31/2014
N012977-010D	Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	7/17/2014	7/31/2014
N012977-011A	YAU-059-Q3	Water	7/17/2014 10:16:00 AM	7/17/2014	7/31/2014
N012977-011B	YAU-059-Q3	Water	7/17/2014 10:16:00 AM	7/17/2014	7/31/2014
N012977-011C	YAU-059-Q3	Water	7/17/2014 10:16:00 AM	7/17/2014	7/31/2014
N012977-011D	YAU-059-Q3	Water	7/17/2014 10:16:00 AM	7/17/2014	7/31/2014
N012977-011E	YAU-059-Q3	Water	7/17/2014 10:16:00 AM	7/17/2014	7/31/2014



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-21A-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 11:52:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3400	29	29	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-954-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 12:02:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3300	29	29	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-21B1-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 11:06:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate: 7/21/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1500	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-004

Client Sample ID: MW-31-059-Q3
Collection Date: 7/17/2014 1:58:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2900	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-005

Client Sample ID: IW-01-059-Q3
Collection Date: 7/17/2014 8:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-02-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1000	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-03-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:56:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-008

Client Sample ID: RPVT-059-Q3
Collection Date: 7/17/2014 9:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: Y-01-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 9:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1600	14	14	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	Y-03-059-Q3
Lab Order:	N012977	Collection Date:	7/17/2014 10:01:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N012977-010		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1700	15	15	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: YAU-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 10:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46106	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: PBW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811024						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46106	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: LCSW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		970.000	10	1000	0	97.0	80	120			

Sample ID N012977-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: ZZZZZ	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811029						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3360.000	29					3414	1.60	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-21A-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 11:52:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	100	0.011	0.67	pCi/L	1	7/24/2014 12:17 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-954-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 12:02:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	100	0.011	0.67	pCi/L	1	7/24/2014 12:22 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-21B1-059-Q3
Lab Order:	N012977	Collection Date:	7/17/2014 11:06:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N012977-003		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118	PrepDate	7/21/2014	Analyst: CEI
Uranium	34 0.011 0.67	pCi/L	1	7/24/2014 12:39 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-004

Client Sample ID: MW-31-059-Q3
Collection Date: 7/17/2014 1:58:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	69	0.011	0.67	pCi/L	1	7/24/2014 12:43 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-01-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	35	0.011	0.67	pCi/L	1	7/24/2014 12:55 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-02-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	28	0.011	0.67	pCi/L	1	7/24/2014 01:01 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL

Client Sample ID: IW-03-059-Q3

Lab Order: N012977

Collection Date: 7/17/2014 8:56:00 AM

Project: PGE Hinkley, 492581.UR.AU.FW

Matrix: WATER

Lab ID: N012977-007

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118				PrepDate: 7/21/2014		Analyst: CEI
Uranium	18	0.011	0.67		pCi/L	1	7/24/2014 01:06 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: RPVT-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 9:11:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118	PrepDate: 7/21/2014	Analyst: CEI
Uranium	31 0.011 0.67	pCi/L	7/24/2014 01:12 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: Y-01-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 9:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	29	0.011	0.67	pCi/L	1	7/24/2014 01:17 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: Y-03-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118	PrepDate: 7/21/2014	Analyst: CEI
Uranium	31 0.011 0.67	pCi/L	1 7/24/2014 01:23 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: YAU-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 10:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140723B	QC Batch: 46118			PrepDate	7/21/2014	Analyst: CEI
Uranium	29	0.011	0.67	pCi/L	1	7/24/2014 01:28 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46118	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: PBW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812788
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46118	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: LCSW	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812789
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	6.627	0.67	6.700	0	98.9 85 115

Sample ID N012965-001A-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812795
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	15.140	0.67	6.700	7.264	118 75 125

Sample ID N012965-001A-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/23/2014	SeqNo: 1812796
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	14.903	0.67	6.700	7.264	114 75 125 15.14 1.58 20

Sample ID N012977-004B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94274
Client ID: ZZZZZZ	Batch ID: 46118	TestNo: EPA 200.8		Analysis Date: 7/24/2014	SeqNo: 1812809
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	81.366	0.67	6.700	69.45	178 75 125 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-001

Client Sample ID: MW-21A-059-Q3
Collection Date: 7/17/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/21/2014 02:01 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	2.6	0.030	1.0		µg/L	1	7/22/2014 12:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-002

Client Sample ID: MW-954-059-Q3
Collection Date: 7/17/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/21/2014 02:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/22/2014 12:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-003

Client Sample ID: MW-21B1-059-Q3
Collection Date: 7/17/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	7.6	0.016	0.20		µg/L	1	7/21/2014 02:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	8.5	0.030	1.0		µg/L	1	7/22/2014 12:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-004

Client Sample ID: MW-31-059-Q3
Collection Date: 7/17/2014 1:58:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	3.2	0.016	0.20		µg/L	1	7/21/2014 03:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	7/22/2014 12:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-005

Client Sample ID: IW-01-059-Q3
Collection Date: 7/17/2014 8:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	26	0.032	0.40		µg/L	2	7/21/2014 03:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	28	0.030	1.0		µg/L	1	7/22/2014 12:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-006

Client Sample ID: IW-02-059-Q3
Collection Date: 7/17/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	15	0.016	0.20		µg/L	1	7/21/2014 03:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	17	0.030	1.0		µg/L	1	7/22/2014 01:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-007

Client Sample ID: IW-03-059-Q3
Collection Date: 7/17/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 12:05 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 06:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/22/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-008

Client Sample ID: RPVT-059-Q3
Collection Date: 7/17/2014 9:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	23	0.032	0.40		µg/L	2	7/19/2014 06:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	24	0.030	1.0		µg/L	1	7/22/2014 01:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL **Client Sample ID:** Y-01-059-Q3
Lab Order: N012977 **Collection Date:** 7/17/2014 9:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012977-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC7_140721A** QC Batch: **R94246** PrepDate Analyst: **QBM**
Hexavalent Chromium 12 0.016 0.20 µg/L 1 7/21/2014 03:57 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: Y-03-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246			PrepDate			Analyst: QBM
Hexavalent Chromium	11	0.016	0.20		µg/L	1	7/21/2014 04:06 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-011

Client Sample ID: YAU-059-Q3
Collection Date: 7/17/2014 10:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	7.1	0.016	0.20		µg/L	1	7/21/2014 04:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140722A	QC Batch: 46101				PrepDate	7/19/2014	Analyst: CEI
Chromium	7.9	0.030	1.0		µg/L	1	7/22/2014 01:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94251	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: PBW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812086						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94251	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: LCSW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.212 0.060 0.2000 0 106 90 110

Sample ID N012968-009ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.381 0.060 0.3788 0.679 20

Sample ID N012977-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.206 0.060 0.2000 0 103 90 110

Sample ID N012992-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812094						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.235 0.060 0.2000 0.01742 109 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012992-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.237	0.060	0.2000	0.01742	110	90	110	0.2348	0.792	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94227	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: PBW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94227	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: LCSW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.958	0.20	5.000	0	99.2	90	110				
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Sample ID N012990-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.017	0.20						0.01670	0	20	
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Sample ID N012990-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.028	0.20	1.000	0.01670	101	90	110				
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Sample ID N012990-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810456						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.000	0.20	1.000	0.01670	98.3	90	110	1.028	2.79	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810458							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0.01930	97.6	90	110				

Sample ID N012990-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810460							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.048	0.20	1.000	1.057	99.2	90	110				

Sample ID N012977-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810493							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012975-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.513	0.20	5.000	5.446	101	90	110				

Sample ID N012963-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0.02570	98.3	90	110				

Sample ID N012977-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.885	0.20	1.000	1.908	97.7	90	110				

Sample ID N012977-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.918	0.20	1.000	1.930	98.8	90	110				

Sample ID N012977-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.687	0.20	5.000	7.592	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012977-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811372							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.226	0.20	5.000	3.214	100	90	110				

Sample ID N012977-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811378							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.205	0.20	5.000	7.134	101	90	110				

Sample ID N012992-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811382							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46101	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: PBW	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46101	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: LCSW	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.249 1.0 10.00 0 112 85 115

Sample ID N012976-022B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.668 1.0 10.00 0.1655 105 75 125

Sample ID N012976-022B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/19/2014	RunNo: 94243						
Client ID: ZZZZZZ	Batch ID: 46101	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811097						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.695 1.0 10.00 0.1655 105 75 125 10.67 0.257 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-21A-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 11:52:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate			Analyst: PS
Nitrate as N	8.5	0.051	0.50	mg/L	10		7/18/2014 01:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: MW-954-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 12:02:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate			Analyst: PS
Nitrate as N	7.7	0.026	0.25	mg/L	5		7/18/2014 01:52 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-003

Client Sample ID: MW-21B1-059-Q3
Collection Date: 7/17/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718B	QC Batch: R94212				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	7/18/2014 06:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211				PrepDate		Analyst: PS
Nitrate as N	16	0.051	0.50		mg/L	10	7/18/2014 02:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-004

Client Sample ID: MW-31-059-Q3
Collection Date: 7/17/2014 1:58:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate		Analyst: PS
Nitrate as N	14	0.051	0.50	mg/L	10	7/18/2014 02:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-01-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate			Analyst: PS
Nitrate as N	11	0.051	0.50	mg/L	10		7/18/2014 02:30 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: IW-02-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate		Analyst: PS
Nitrate as N	14	0.051	0.50	mg/L	10	7/18/2014 02:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL
Lab Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012977-007

Client Sample ID: IW-03-059-Q3
Collection Date: 7/17/2014 8:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140718A** QC Batch: **R94211** PrepDate Analyst: **PS**
Nitrate as N 13 0.051 0.50 mg/L 10 7/18/2014 02:56 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: RPVT-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 9:11:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate			Analyst: PS
Nitrate as N	12	0.051	0.50	mg/L	10		7/18/2014 03:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 31-Jul-14

CLIENT: CH2M HILL	Client Sample ID: YAU-059-Q3
Lab Order: N012977	Collection Date: 7/17/2014 10:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012977-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140718A	QC Batch: R94211			PrepDate		Analyst: PS
Nitrate as N	13	0.051	0.50	mg/L	10	7/18/2014 03:46 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94212_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: PBW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94212_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: LCSW	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809435
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P) 2.560 0.10 2.500 0 102 90 110

Sample ID N012975-007C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809440
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N012975-007C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809441
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P) 3.150 0.10 2.500 0 126 80 120 S

Sample ID N012975-007C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94212
Client ID: ZZZZZ	Batch ID: R94212	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809442
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Orthophosphate, Dissolved (as P) 3.198 0.10 2.500 0 128 80 120 3.150 1.51 20 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012975-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.590	0.50	10.00	7.380	102	80	120	17.76	0.962	20	

Sample ID N012975-009C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94211						
Client ID: ZZZZZZ	Batch ID: R94211	TestNo: EPA 300.0		Analysis Date: 7/18/2014	SeqNo: 1809423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	18.100	0.50	10.00	8.230	98.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/17/2014 Workorder: N012977
 Rep sample Temp (Deg C): 3.2/3.5/3.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

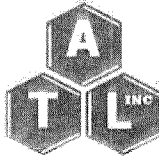
Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC *Alcort* 07/18/2014

Reviewed By: *ggg* 07/21/14



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CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

18-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 900.0	
N012977-001E / MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	32OZP	1	
N012977-002E / MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	32OZP	1	
N012977-003E / MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	32OZP	1	
N012977-004E / MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	32OZP	1	
N012977-005E / IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	32OZP	1	
N012977-006E / IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	32OZP	1	
N012977-007E / IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	32OZP	1	
N012977-008E / RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	32OZP	1	
N012977-009D / Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	32OZP	1	
N012977-010D / Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	32OZP	1	
N012977-011E / YAU-059-Q3	Water	7/17/2014 10:16:00 AM	32OZP	1	

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012977 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill Samples. For questions, please contact Shawn Duffy at (530)941-9227.

TK# 7706 4108 1646
Mps # 7706 4108 1554

	Date/Time		Date/Time
Relinquished by: <u>PAULO GUMAWID <i>Paulo Gumawid</i></u>	<u>07/18/14</u>	Received by: _____	
Relinquished by: _____		Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012977-001D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0943-63.9748)*1000000}{35}$$

3414.29 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 3400.00 \text{ mg/L}$$


7/23/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/21/2014								TDS/CONDUCTIVITY
Date Finished: 7/22/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46106	100	64.1088	64.1091	3	1	3.00		
LCS-46106	100	63.5089	63.6059	970	1	970.00		
N012974-001C	100	63.3747	63.4042	295	1	295.00	390	0.76
N012975-016D	100	63.7999	63.8702	703	1	703.00	988	0.71
N012977-001D	35	63.9748	64.0943	1195	2.8571429	3414.29	4040	0.85
N012977-001D-DUP	35	63.9959	64.1135	1176	2.8571429	3360.00	4040	0.83
N012977-002D	35	62.9967	63.1105	1138	2.8571429	3251.43	4040	0.80
N012977-003D	100	63.7809	63.9274	1465	1	1465.00	2040	0.72
N012977-004D	100	64.2745	64.5694	2949	1	2949.00	3820	0.77
N012977-005D	100	61.3654	61.4955	1301	1	1301.00	1840	0.71
N012977-006D	100	60.6371	60.7374	1003	1	1003.00	1633	0.61
N012977-007D	100	61.7311	61.8371	1060	1	1060.00	1607	0.66
N012977-008D	100	60.8359	60.9544	1185	1	1185.00	1732	0.68
N012977-009C	70	61.1351	61.2455	1104	1.4285714	1577.14	2130	0.74
N012977-010C	65	64.2554	64.3676	1122	1.5384615	1726.15	2320	0.74
N012977-011D	100	61.6737	61.7962	1225	1	1225.00	1739	0.70
N012990-007C	100	60.5348	60.6313	965	1	965.00	1466	0.66
N012990-014E	100	60.7711	60.8051	340	1	340.00	487	0.70

gmer
7/23/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N012977-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 154.268375934282 * 1 * (25/25) * 0.67 \\ &= 103.359811875969 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 100$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012977
Test Method: EPA 200.8
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46118

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012965-001A-DT 5X	Uranium	pCi/L	7.311465653	PASS	7.26380436	0.66%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012965-001A-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46118	TestNo: EPA 200.8	Analysis Date: 7/23/2014	SeqNo: 1812792							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	21.589	1.3	13.40	7.264	107	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012977-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.000000 * 1 \\ &= 0.000000\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 7/31/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012977-008A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 11.3524 * 2 \\ &= 22.7048 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 23$$

 7/31/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N012977-002C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.549 * 5 \\ &= 7.745 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 7.7$$

 7/31/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012977-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.63374814003845 * 1 * (25/25) \\ &= 2.63374814003845 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.6$$

 7/31/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012977
Test Method: EPA 6020
Analysis Date: 7/22/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46101

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012976-022B-DT 5X	Chromium	µg/L	0	NA	0.165467539	100.00%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012977
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012976-022B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94243						
Client ID: ZZZZZ	Batch ID: 46101	TestNo: EPA 6020 EPA 3010A	Analysis Date: 7/22/2014	SeqNo: 1811095							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.304	2.0	20.00	0.1655	101	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 13, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012977
Pace Project No.: 30125719

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012977
Pace Project No.: 30125719

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125719001	N012977-001E/MW-21A-059-Q3	Water	07/17/14 11:52	07/24/14 08:45
30125719002	N012977-002E/MW-954-059-Q3	Water	07/17/14 12:02	07/24/14 08:45
30125719003	N012977-003E/MW-21B1-059-Q3	Water	07/17/14 11:06	07/24/14 08:45
30125719004	N012977-004EMW-31-059-Q3	Water	07/17/14 13:58	07/24/14 08:45
30125719005	N012977-005E/IW-01-059-Q3	Water	07/17/14 08:21	07/24/14 08:45
30125719006	IN012977-006E/IW-02-059-Q3	Water	07/17/14 08:41	07/24/14 08:45
30125719007	N012977-007E/IW-03-059-Q3	Water	07/17/14 08:56	07/24/14 08:45
30125719008	N012977-008E/RPVT-059-Q3	Water	07/17/14 09:11	07/24/14 08:45
30125719009	N012977-009D/Y-01-059-Q3	Water	07/17/14 09:41	07/24/14 08:45
30125719010	N012977-010D/Y-03-059-Q3	Water	07/17/14 10:01	07/24/14 08:45
30125719011	N012977-011EYAU-059-Q3	Water	07/17/14 10:16	07/24/14 08:45

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SAMPLE ANALYTE COUNT

Project: N012977
Pace Project No.: 30125719

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125719001	N012977-001E/MW-21A-059-Q3	EPA 900.0	FCC	2
30125719002	N012977-002E/MW-954-059-Q3	EPA 900.0	FCC	2
30125719003	N012977-003E/MW-21B1-059-Q3	EPA 900.0	FCC	2
30125719004	N012977-004EMW-31-059-Q3	EPA 900.0	FCC	2
30125719005	N012977-005E/IW-01-059-Q3	EPA 900.0	FCC	2
30125719006	IN012977-006E/W-02-059-Q3	EPA 900.0	FCC	2
30125719007	N012977-007E/IW-03-059-Q3	EPA 900.0	FCC	2
30125719008	N012977-008E/RPVT-059-Q3	EPA 900.0	FCC	2
30125719009	N012977-009D/Y-01-059-Q3	EPA 900.0	FCC	2
30125719010	N012977-010D/Y-03-059-Q3	EPA 900.0	FCC	2
30125719011	N012977-011EYAU-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012977
Pace Project No.: 30125719

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 13, 2014

General Information:

11 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

Upon receipt at the laboratory, three mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

- N012977-001E/MW-21A-059-Q3 (Lab ID: 30125719001)
- N012977-002E/MW-954-059-Q3 (Lab ID: 30125719002)
- N012977-003E/MW-21B1-059-Q3 (Lab ID: 30125719003)
- N012977-004EMW-31-059-Q3 (Lab ID: 30125719004)
- IN012977-006E/W-02-059-Q3 (Lab ID: 30125719006)
- N012977-009D/Y-01-059-Q3 (Lab ID: 30125719009)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: N012977
Pace Project No.: 30125719

Sample: N012977-001E/MW-21A-059-Q3 **Lab ID: 30125719001** Collected: 07/17/14 11:52 Received: 07/24/14 08:45 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, three mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	173 ± 35.2 (12.6) C:NA T:NA	pCi/L	07/30/14 20:27	12587-46-1	
Gross Beta	EPA 900.0	6.71 ± 4.13 (5.65) C:NA T:NA	pCi/L	07/30/14 20:27	12587-47-2	

Sample: N012977-002E/MW-954-059-Q3 **Lab ID: 30125719002** Collected: 07/17/14 12:02 Received: 07/24/14 08:45 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, three mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	131 ± 27.3 (10.9) C:NA T:NA	pCi/L	07/30/14 20:28	12587-46-1	
Gross Beta	EPA 900.0	3.08 ± 3.69 (5.70) C:NA T:NA	pCi/L	07/30/14 20:28	12587-47-2	

Sample: N012977-003E/MW-21B1-059-Q3 **Lab ID: 30125719003** Collected: 07/17/14 11:06 Received: 07/24/14 08:45 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, three mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	49.7 ± 11.2 (7.23) C:NA T:NA	pCi/L	07/30/14 20:28	12587-46-1	
Gross Beta	EPA 900.0	5.80 ± 2.12 (4.00) C:NA T:NA	pCi/L	07/30/14 20:28	12587-47-2	

Sample: N012977-004EMW-31-059-Q3 **Lab ID: 30125719004** Collected: 07/17/14 13:58 Received: 07/24/14 08:45 Matrix: Water

PWS: Site ID: Sample Type:

Comments: • Upon receipt at the laboratory, three mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	36.7 ± 9.24 (6.59) C:NA T:NA	pCi/L	07/30/14 20:28	12587-46-1	
Gross Beta	EPA 900.0	1.64 ± 3.53 (6.29) C:NA T:NA	pCi/L	07/30/14 20:28	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N012977

Pace Project No.: 30125719

Sample: N012977-010D/Y-03-059-Q3 **Lab ID: 30125719010** Collected: 07/17/14 10:01 Received: 07/24/14 08:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	40.5 ± 8.67 (4.22) C:NA T:NA	pCi/L	08/01/14 19:11	12587-46-1	
Gross Beta	EPA 900.0	6.43 ± 2.05 (4.00) C:NA T:NA	pCi/L	08/01/14 19:11	12587-47-2	

Sample: N012977-011EYAU-059-Q3 **Lab ID: 30125719011** Collected: 07/17/14 10:16 Received: 07/24/14 08:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	40.2 ± 8.49 (4.57) C:NA T:NA	pCi/L	08/02/14 18:54	12587-46-1	
Gross Beta	EPA 900.0	8.12 ± 1.93 (4.00) C:NA T:NA	pCi/L	08/02/14 18:54	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N012977
Pace Project No.: 30125719

QC Batch:	RADC/20697	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30125719001, 30125719002, 30125719003, 30125719004, 30125719005, 30125719006, 30125719007, 30125719008, 30125719009, 30125719010, 30125719011		

METHOD BLANK:	765898	Matrix:	Water
Associated Lab Samples:	30125719001, 30125719002, 30125719003, 30125719004, 30125719005, 30125719006, 30125719007, 30125719008, 30125719009, 30125719010, 30125719011		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.131 ± 0.552 (1.66) C:NA T:NA	pCi/L	07/31/14 06:40	
Gross Beta	-0.382 ± 0.654 (1.78) C:NA T:NA	pCi/L	07/31/14 06:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.assetlabs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

30125719

Field Sampler: SIGNED

18-Jul-14

Handwritten initials/signature

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012977-001E / MW-21A-059-Q3	Water	7/17/2014 11:52:00 AM	32OZP	1		001
N012977-002E / MW-954-059-Q3	Water	7/17/2014 12:02:00 PM	32OZP	1		002
N012977-003E / MW-21B1-059-Q3	Water	7/17/2014 11:06:00 AM	32OZP	1		003
N012977-004E / MW-31-059-Q3	Water	7/17/2014 1:58:00 PM	32OZP	1		004
N012977-005E / IW-01-059-Q3	Water	7/17/2014 8:21:00 AM	32OZP	1		005
N012977-006E / IW-02-059-Q3	Water	7/17/2014 8:41:00 AM	32OZP	1		006
N012977-007E / IW-03-059-Q3	Water	7/17/2014 8:56:00 AM	32OZP	1		007
N012977-008E / RPVT-059-Q3	Water	7/17/2014 9:11:00 AM	32OZP	1		008
N012977-009D / Y-01-059-Q3	Water	7/17/2014 9:41:00 AM	32OZP	1		009
N012977-010D / Y-03-059-Q3	Water	7/17/2014 10:01:00 AM	32OZP	1		010
N012977-011E / YAU-059-Q3	Water	7/17/2014 10:16:00 AM	32OZP	1		011

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N012977 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill Samples. For questions, please contact Shawn Duffy at (530)941-9227.

TRK# 7706 4108 1646

Mps # 7706 4108 1554

Date/Time	Date/Time
07/18/14 17:00	7-24-14 0845
Relinquished by: PAULO GUMAWID	Received by: [Signature]
Relinquished by:	Received by:



Sample Condition Upon Receipt

Client Name: ASSET

Project # 30125719

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770647769230

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other PAPER

Thermometer Used NA Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: 7-24-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>WA</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>7-24-14 1610 3ml HNO3 to samples 001-004, 006, and 009.</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: <u>DEV</u> Lot # of added preservative: <u>DL14-0603</u>
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Carino Series Date: 7/26/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

August 04, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012988

RE: PGE Hinkley, 492581.UR.SO

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 18, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SO
Lab Order: N012988

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SO
Lab Order: N012988
Contract No: 2014-ATU-SOIL

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012988-001A	R-SOIL-1-U-059-Q3	Soil	7/18/2014 9:47:00 AM	7/18/2014	8/4/2014
N012988-002A	R-SOIL-1-D-059-Q3	Soil	7/18/2014 10:07:00 AM	7/18/2014	8/4/2014
N012988-003A	R-SOIL-2-U-059-Q3	Soil	7/18/2014 10:58:00 AM	7/18/2014	8/4/2014
N012988-004A	R-SOIL-2-D-059-Q3	Soil	7/18/2014 11:16:00 AM	7/18/2014	8/4/2014
N012988-005A	D-SOIL-1-U-059-Q3	Soil	7/18/2014 8:30:00 AM	7/18/2014	8/4/2014
N012988-006A	D-SOIL-1-D-059-Q3	Soil	7/18/2014 8:44:00 AM	7/18/2014	8/4/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** R-SOIL-1-U-059-Q3
Lab Order: N012988 **Collection Date:** 7/18/2014 9:47:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012988-001

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICP-MS METALS

EPA 200.8

RunID: **ICP7_140730A** QC Batch: **46201** PrepDate: **7/29/2014** Analyst: **CEI**
Uranium 0.84 0.086 0.53 mg/Kg-dry 1 7/30/2014 03:33 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-2-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 10:58:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP7_140730A	QC Batch: 46201	PrepDate: 7/29/2014	Analyst: CEI
Uranium	0.89 0.088 0.53	mg/Kg-dry	1 7/30/2014 03:39 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-1-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 8:30:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 200.8

RunID: ICP7_140730A	QC Batch: 46201	PrepDate: 7/29/2014	Analyst: CEI
Uranium	1.2 0.086 0.52	mg/Kg-dry	1 7/30/2014 03:44 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_S_U_PGE

Sample ID MB-46201	SampType: MBLK	TestCode: 200.8_S_U_P	Units: mg/Kg	Prep Date: 7/29/2014	RunNo: 94357
Client ID: PBW	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815944
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium ND 0.50

Sample ID LCS-46201	SampType: LCS	TestCode: 200.8_S_U_P	Units: mg/Kg	Prep Date: 7/29/2014	RunNo: 94357
Client ID: LCSW	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815945
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium 5.352 0.50 5.000 0 107 85 115

Sample ID N012972-002A-MS	SampType: MS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815963
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium 7.484 0.52 5.159 1.348 119 75 125

Sample ID N012972-002A-MSD	SampType: MSD	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815966
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium 7.545 0.52 5.172 1.348 120 75 125 7.484 0.817 20

Sample ID N012988-001A-MS	SampType: MS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date: 7/29/2014	RunNo: 94357
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8		Analysis Date: 7/30/2014	SeqNo: 1815967
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium 7.124 0.52 5.249 0.8354 120 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-001

Client Sample ID: R-SOIL-1-U-059-Q3
Collection Date: 7/18/2014 9:47:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46112			PrepDate: 7/21/2014		Analyst: CEI
Chromium	11	0.012	0.26	mg/Kg-dry	1	7/28/2014 02:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-1-D-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46112	PrepDate: 7/21/2014	Analyst: CEI
Chromium	8.1 0.013	0.28	mg/Kg-dry 1 7/28/2014 03:16 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-2-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 10:58:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46112	PrepDate: 7/21/2014	Analyst: CEI
Chromium	9.1 0.012	0.27	mg/Kg-dry 1 7/28/2014 03:22 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-2-D-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46112	PrepDate: 7/21/2014	Analyst: CEI
Chromium	8.1 0.012	0.27	mg/Kg-dry 1 7/28/2014 03:28 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-005

Client Sample ID: D-SOIL-1-U-059-Q3
Collection Date: 7/18/2014 8:30:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICPMS METALS

EPA 3050B

EPA 6020

RunID: ICP7_140728A	QC Batch: 46112			PrepDate	7/21/2014	Analyst: CEI	
Chromium	5.6	0.012	0.26		mg/Kg-dry	1	7/28/2014 03:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** D-SOIL-1-D-059-Q3
Lab Order: N012988 **Collection Date:** 7/18/2014 8:44:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012988-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ICPMS METALS

EPA 3050B

EPA 6020

RunID: **ICP7_140728A** QC Batch: **46112** PrepDate: **7/21/2014** Analyst: **CEI**
Chromium 9.9 0.012 0.26 mg/Kg-dry 1 7/28/2014 03:39 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S_PGE

Sample ID	LCS-46112	SampType:	LCS	TestCode:	6020_S_PGE	Units:	mg/Kg	Prep Date:	7/21/2014	RunNo:	94326			
Client ID:	LCSS	Batch ID:	46112	TestNo:	EPA 6020 EPA 3050B			Analysis Date:	7/28/2014	SeqNo:	1814643			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium		5.260		0.25	5.000	0		105	85	115				

Sample ID	MB-46112	SampType:	MBLK	TestCode:	6020_S_PGE	Units:	mg/Kg	Prep Date:	7/21/2014	RunNo:	94326			
Client ID:	PBS	Batch ID:	46112	TestNo:	EPA 6020 EPA 3050B			Analysis Date:	7/28/2014	SeqNo:	1814647			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium		ND		0.25										

Sample ID	N012988-001A-MS	SampType:	MS	TestCode:	6020_S_PGE	Units:	mg/Kg-dry	Prep Date:	7/21/2014	RunNo:	94326			
Client ID:	ZZZZZZ	Batch ID:	46112	TestNo:	EPA 6020 EPA 3050B			Analysis Date:	7/28/2014	SeqNo:	1814650			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium		18.179		0.26	5.249	11.35		130	75	125				S

Sample ID	N012988-001A-MSD	SampType:	MSD	TestCode:	6020_S_PGE	Units:	mg/Kg-dry	Prep Date:	7/21/2014	RunNo:	94326			
Client ID:	ZZZZZZ	Batch ID:	46112	TestNo:	EPA 6020 EPA 3050B			Analysis Date:	7/28/2014	SeqNo:	1814651			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium		18.076		0.26	5.284	11.35		127	75	125	18.18	0.569	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-1-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 9:47:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/24/2014 12:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** R-SOIL-1-D-059-Q3
Lab Order: N012988 **Collection Date:** 7/18/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012988-002

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
	EPA 3060A			EPA 7199			
RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.22		mg/Kg-dry	1	7/24/2014 01:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** R-SOIL-2-U-059-Q3
Lab Order: N012988 **Collection Date:** 7/18/2014 10:58:00 AM
Project: PGE Hinkley, 492581.UR.SO **Matrix:** SOIL
Lab ID: N012988-003

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
	EPA 3060A			EPA 7199			
RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/24/2014 04:06 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-004

Client Sample ID: R-SOIL-2-D-059-Q3
Collection Date: 7/18/2014 11:16:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/24/2014 04:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-005

Client Sample ID: D-SOIL-1-U-059-Q3
Collection Date: 7/18/2014 8:30:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.011	0.21		mg/Kg-dry	1	7/24/2014 05:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-006

Client Sample ID: D-SOIL-1-D-059-Q3
Collection Date: 7/18/2014 8:44:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 3060A

EPA 7199

RunID: IC1_140724A	QC Batch: 46141			PrepDate	7/23/2014	Analyst: QBM	
Hexavalent Chromium	ND	0.010	0.20		mg/Kg-dry	1	7/24/2014 05:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_S_PGE

Sample ID MB-46141	SampType: MBLK	TestCode: 7199_S_PGE	Units: mg/Kg	Prep Date: 7/23/2014	RunNo: 94281
Client ID: PBS	Batch ID: 46141	TestNo: EPA 7199 EPA 3060A		Analysis Date: 7/24/2014	SeqNo: 1813865
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-46141	SampType: LCS	TestCode: 7199_S_PGE	Units: mg/Kg	Prep Date: 7/23/2014	RunNo: 94281
Client ID: LCSS	Batch ID: 46141	TestNo: EPA 7199 EPA 3060A		Analysis Date: 7/24/2014	SeqNo: 1813866
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	3.887	0.20	4.000	0	97.2 80 120

Sample ID N012988-001A-DUP	SampType: DUP	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/23/2014	RunNo: 94281
Client ID: ZZZZZ	Batch ID: 46141	TestNo: EPA 7199 EPA 3060A		Analysis Date: 7/24/2014	SeqNo: 1813869
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.095	0.21			0.1186 0 20

Sample ID N012988-002A-MS	SampType: MS	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/23/2014	RunNo: 94281
Client ID: ZZZZZ	Batch ID: 46141	TestNo: EPA 7199 EPA 3060A		Analysis Date: 7/24/2014	SeqNo: 1813872
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	4.325	0.22	4.472	0.05488	95.5 75 125

Sample ID N012988-002A-MSD	SampType: MSD	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/23/2014	RunNo: 94281
Client ID: ZZZZZ	Batch ID: 46141	TestNo: EPA 7199 EPA 3060A		Analysis Date: 7/24/2014	SeqNo: 1813873
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	4.308	0.22	4.472	0.05488	95.1 75 125 4.325 0.412 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 7199_S_PGE

Sample ID N012988-002A-MS_I	SampType: MS	TestCode: 7199_S_PGE	Units: mg/Kg-dry	Prep Date: 7/23/2014	RunNo: 94281						
Client ID: ZZZZZZ	Batch ID: 46141	TestNo: EPA 7199	EPA 3060A	Analysis Date: 7/24/2014	SeqNo: 1813874						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	745.073	11	762.5	0.05488	97.7	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-1-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 9:47:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	4.987	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-1-D-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate		Analyst: LCC
Percent Moisture	10.60	0.1000	0.1000	wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-2-U-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 10:58:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	6.581	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: R-SOIL-2-D-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	6.668	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012988
Project: PGE Hinkley, 492581.UR.SO
Lab ID: N012988-005

Client Sample ID: D-SOIL-1-U-059-Q3
Collection Date: 7/18/2014 8:30:00 AM
Matrix: SOIL

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308				PrepDate		Analyst: LCC
Percent Moisture	4.409	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: D-SOIL-1-D-059-Q3
Lab Order: N012988	Collection Date: 7/18/2014 8:44:00 AM
Project: PGE Hinkley, 492581.UR.SO	Matrix: SOIL
Lab ID: N012988-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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PERCENT MOISTURE

D2216

RunID: WETCHEM_140725B	QC Batch: R94308			PrepDate			Analyst: LCC
Percent Moisture	2.161	0.1000	0.1000		wt%	1	7/25/2014

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: PMOIST

Sample ID MB-R94308	SampType: MBLK	TestCode: PMOIST	Units: wt%	Prep Date:	RunNo: 94308
Client ID: PBS	Batch ID: R94308	TestNo: D2216		Analysis Date: 7/25/2014	SeqNo: 1813654
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	ND	0.1000			

Sample ID N012972-020A-DUP	SampType: DUP	TestCode: PMOIST	Units: wt%	Prep Date:	RunNo: 94308
Client ID: ZZZZZZ	Batch ID: R94308	TestNo: D2216		Analysis Date: 7/25/2014	SeqNo: 1813660
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	9.559	0.1000		9.777	2.25 30

Sample ID N012988-006A-DUP	SampType: DUP	TestCode: PMOIST	Units: wt%	Prep Date:	RunNo: 94308
Client ID: ZZZZZZ	Batch ID: R94308	TestNo: D2216		Analysis Date: 7/25/2014	SeqNo: 1813668
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Percent Moisture	2.029	0.1000		2.161	6.30 30

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley
 Location Hinkley
 Project Number 492581.UR.SO
 Project Manager Jennifer Low
 Sample Manager Jim Hanvey
 Cell Number (404) 229-2181
 Fax Number (510) 622-9136
 Task Order 59
 Project 2014-ATU-SOIL-059-Q3
 Turnaround Time 10 Days
 Shipping Date:
 COC Number:

SAMPLE ID	DATE	TIME	Matrix	Container				Number of Containers	COMMENTS
				250 ml Poly	4-8oz jar	4-8oz jar	4-8oz jar		
RAW-SOIL-1-0-0-5	7/18/14	0947	SO	Cr (VI) (E218.6) FF	Metals (6020A) Cr	Cr (VI) (7199)	Uranium (200.8)	1	
RAW-SOIL-1-5-5-5	7/18/14	1007	SO					1	
RAW-SOIL-2-0-0-5	7/18/14	1058	SO					1	
RAW-SOIL-2-0-0-5	7/18/14	1116	SO					1	
DIV-SOIL-1-0-0-5	7/18/14	0830	SO					1	
DIV-SOIL-1-5-5-5	7/18/14	0844	SO					1	
RAW-SOIL-2-5-5-5	7/18/14	1116	SO					1	
TOTAL NUMBER OF CONTAINERS									6

Please revise per the redline and additions shown below.
 Thanks, Jim Hanvey 7/21/14
James L. Hanvey
 Please change the sample IDs as indicated below.
James L. Hanvey
 07/24/2014

delete line
 No 12988-1
 -2
 -3
 -4
 -5
 -6

R-SOIL-1-U-059-Q3
 R-SOIL-1-D-059-Q3
 R-SOIL-2-U-059-Q3
 D-SOIL-1-U-059-Q3
 D-SOIL-1-D-059-Q3
 R-SOIL-2-D-059-Q3

gls
gls

Approved by <i>J. Hanvey</i>	Signatures	Date/Time	Shipping Details	ATTN:	Special Instructions:
Sampled by <i>J. Hanvey</i>		7-18-14 1325	Method of Shipment: On Ice: <i>yes</i> / no <i>5.5°C</i>		Report Copy to: Shawn Duffy (530) 941-9227
Relinquished by <i>J. Hanvey</i>		7-18-14 1320	Airbill No: <i>1242</i>		2525 Airpark Drive, Redding, CA 96001
Received by <i>J. Hanvey</i>		7/18/14 1820	Lab Name: Advanced Technology Laboratories		
Relinquished by <i>J. Hanvey</i>		7/18/14 1820	Lab Phone: (702) 307-2659		

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SO Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-SOIL-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 250 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28				4-8oz jar 4-8oz jar 4-8oz jar 4°C 4°C 4°C NA NA NA 30 30 30				Please revise per the redline and additiuons shown below. Thanks, Jim Hanvey 7/21/14 <i>James L. Hanvey</i>					
				Cr (M) (E218.6) FF	Metals (6020A) Cr	Cr (M) (7199)	Uranium (200.8)										
SAMPLE ID	DATE	TIME	Matrix							Number of Containers	COMMENTS						
RAN-SOIL-1_0-0.5_	7/18/14	0947	SO	X	X	X											
RAN-SOIL-1_5-5.5_	7/18/14	1007	SO	X	X												
RAN-SOIL-2_0-0.5_	7/18/14	1058	SO	X	X	X											
RAN-SOIL-2_0-0.5_	7/18/14	1116	SO	X	X												
DVD-SOIL-1_0-0.5_	7/18/14	0830	SO	X	X	X											
DVD-SOIL-1_5-5.5_	7/18/14	0844	SO	X	X												
RAN-SOIL-2_5-5.5_	7/18/14	1116	SO	X	X					1							
TOTAL NUMBER OF CONTAINERS										6							

Approved by <i>K. Blinn</i> Sampled by <i>J. Hanvey</i> Relinquished by <i>J. Hanvey</i> Received by <i>Shawn Duffy</i> Relinquished by <i>Shawn Duffy</i> Received by <i>Shawn Duffy</i>		Signatures Date/Time 7-18-14 1325 7-18-14 1320 7-18-14 1320 7/18/14 1320 7/18/14 1320 7/18/14 1320		Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.5°C Airbill No: <i>IR#</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
--	--	---	--	--	--	---	--

Project Name PGE Hinkley				Container:	250 ml Poly (NH4)2SO4, NH4, OH, 4°C				4-8oz jar 4-8oz jar 4-8oz jar				
Location Hinkley				Preservatives:	4°C 4°C 4°C								
Project Number 492581.UR.SO				Filtered:	Field NA NA NA								
Project Manager Jennifer Low				Holding Time (days):	28 30 30 30								
Sample Manager Jim Hanvey					Cr (M) (E218.6) FF				Metals (6020A) Cr				
Cell Number (404) 229-2181					Cr (M) (7199)				Uranium (200.8)				
Fax Number (510) 622-9136													
Task Order 59													
Project 2014-ATU-SOIL-059-Q3													
Turnaround Time 10 Days													
Shipping Date:													
COC Number:													
SAMPLE ID	DATE	TIME	Matrix									Number of Containers	COMMENTS
RAN-SOIL-1_0-0.5_	7/18/14	0947	SO	X	X	X						1	
RAN-SOIL-1_5-5.5_	7/18/14	1007	SO	X	X							1	
RAN-SOIL-2_0-0.5_	7/18/14	1058	SO	X	X	X						1	
RAN-SOIL-2_0-0.5_	7/18/14	1116	SO	X	X							1	
DVD-SOIL-1_0-0.5_	7/18/14	0830	SO	X	X	X						1	
DVD-SOIL-1_5-5.5_	7/18/14	0844	SO	X	X							1	
TOTAL NUMBER OF CONTAINERS												6	

Signatures Approved by <i>K. Blinn</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Date/Time 7-18-14 1325 7-18-14 1320 7-18-14 1320 7/18/14 1320 7/18/14 1525 7/18/14 1525		Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.5°C Airbill No: <i>[Signature]</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/18/2014 Workorder: N012988
 Rep sample Temp (Deg C): 3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortes 7/21/2014

Reviewed By:

118 07/22/14

amanda.cortes@assetlaboratories.com

From: amanda.cortes@assetlaboratories.com
Sent: Monday, July 21, 2014 11:05 AM
To: 'Jim.Hanvey@CH2M.com'
Cc: 'Erlene.Contreras@CH2M.com'; 'Priya.Kumar@CH2M.com'; 'Katherine.Blinn@ch2m.com'; 'rsunjara@blainetech.com'; 'marlon@atl-labs.com'; 'samplecontrol.lv@assetlaboratories.com'
Subject: RE: ATU-SOIL, GMP bottle

Thank you, Jim.

I will make sure that all necessary changes are made per your corrections.

Thank you,
Amanda

From: Jim.Hanvey@CH2M.com [<mailto:Jim.Hanvey@CH2M.com>]
Sent: Monday, July 21, 2014 11:01 AM
To: amanda.cortes@assetlaboratories.com
Cc: Erlene.Contreras@CH2M.com; Priya.Kumar@CH2M.com; Katherine.Blinn@ch2m.com; rsunjara@blainetech.com
Subject: RE: ATU-SOIL, GMP bottle

Amanda:
Please revise the attached Chains of Custody per the markup.
Thanks,
Jim
Jim Hanvey
Project Consultant

CH2MHILL
155 Grand Avenue, Suite 800
Oakland, CA 94612
(e) Jim.Hanvey@ch2m.com
(p) 510.587.7631 (direct)
(f) 510.622.9136
(c) 404.229.2181

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Monday, July 21, 2014 9:57 AM
To: Hanvey, Jim/BAO
Cc: marlon@atl-labs.com; samplecontrol.lv@assetlaboratories.com
Subject: ATU-SOIL, GMP bottle

Hello, Jim.

Please advise on the following:

- 1) Two samples are named the same on the ATU-SOIL COC (RAN-SOIL-2_0-0.5_). However, on the sample containers, one is named RAN-SOIL-2-5-5.5_; please reference attached COC.
- 2) For GMP samples, one sample for Cr+6 was received in a metals container preserved in HNO3. The sample ID is MW-853-059-Q3. Please reference attached COC.

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Soil

FORMULA:

Calculate the Uranium concentration, in mg/Kg-dry, in the original sample as follows:

$$\text{Uranium, mg/Kg-dry} = \frac{(A * C * DF * 100)}{(B * (100 - \text{pMoist}) * 1000)}$$

where:

A = ug/L, ICP-MS calculated concentration

B = weight of original sample, Kg

DF = dilution factor

C = Final Vol. of Digestate, L

PMoist = Percent Moisture of Sample

For Sample **N012988-005A**, the concentration in mg/Kg-dry is calculated as follows:

$$\begin{aligned} \text{Uranium, mg/Kg-dry} &= \frac{2.25719200892196 * 0.1 \text{ L} * 10 * 100}{0.002004 \text{ Kg} * (100 - 4.409) * 1000} \\ &= 1.17829421906978 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, mg/Kg-dry} = 1.2$$

CLIENT: CH2M HILL
Work Order: N012988
Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8_S_U_PGE

Sample ID: N012972-002A-PS	SampType: PS	TestCode: 200.8_S_U_P	Units: mg/Kg-dry	Prep Date:	RunNo: 94357						
Client ID: ZZZZZ	Batch ID: 46201	TestNo: EPA 200.8	Analysis Date: 7/30/2014	SeqNo: 1815962							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	7.234	0.52	5.170	1.348	114	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020B

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Soil/Sludge/Solid

FORMULA:

Calculate the Chromium concentration, in mg/Kg-dry, in the original sample as follows:

$$\text{Chromium, mg/Kg-dry} = \frac{(A * C * DF * 100)}{(B * (100 - \text{pMoist}) * 1000)}$$

where:

A = ug/L, ICP-MS calculated concentration

B = weight of original sample, Kg

DF = dilution factor

C = Final Vol. of Digestate, L


PMoist = Percent Moisture of Sample

For Sample **N012988-001A**, the concentration in mg/Kg-dry is calculated as follows:

$$\begin{aligned} \text{Chromium, mg/Kg-dry} &= \frac{21.56545427 * 0.1 \text{ L} * 10 * 100}{0.002000 \text{ Kg} * (100 - 4.987) * 1000} \\ &= 11.3486854452893 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, mg/Kg-dry} = 11$$

 8/1/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012988
Test Method: EPA 6020
Analysis Date: 7/28/2014

Dilution Test Summary

Matrix: Soil
Batch No.: 46112

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments: _____

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012988-001A-DT 5X	Chromium	mg/Kg-dry	11.32800544	PASS	11.34868545	0.18%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
 Work Order: N012988
 Project: PGE Hinkley, 492581.UR.SO

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_S_PGE

Sample ID: N012988-001A-PS	SampType: PS	TestCode: 6020_S_PGE	Units: mg/Kg-dry	Prep Date:	RunNo: 94326						
Client ID: ZZZZZZ	Batch ID: 46112	TestNo: EPA 6020	EPA 3050B	Analysis Date: 7/28/2014	SeqNo: 1814649						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	18.634	0.26	5.262	11.35	138	80	120				S

DT @ 5x is within criteria

Nancy 8/1/2014

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - R RPD outside accepted recovery limits
 - Calculations are based on raw values
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 7199

TEST NAME: HEXAVALENT CHROMIUM BY IC

MATRIX: Soil

FORMULA:

Calculate the Hexavalent Chromium concentration, in mg/Kg, in the original sample as follows:

$$\text{Cr}^{+6}, \text{ mg/Kg-dry} = \frac{(A * DF * 0.1 * 20) * 100}{B (100-\% \text{Moisture}) 1000}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration

DF = dilution factor

B = weight of sample in kg

20 = dilution due to the matrix of the digestate

For **N012988-006A**, concentration in mg/Kg is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \text{ mg/Kg-dry} &= \frac{(0.049513 * 1 * 0.1 * 20) * 100}{0.002501 (100-2.161) 1000} \\ &= 0.04046910 \end{aligned}$$

Since PQL is 0.2 mg/Kg,

$$\text{Cr}^{+6}, \text{ mg/Kg-dry} = \text{ND}$$



8/4/2014

SAMPLE CALCULATION

METHOD: ASTM D 2216-05

TEST NAME: Determination of Water Content

MATRIX: SOIL

FORMULA:

Calculate the % Moisture in the original sample as follows:

$$\% \text{ Moisture} = ((A-B) / (A-C)) * 100$$

where:

A = mass of aluminum dish + sample before drying, g,

B = mass of aluminum dish + sample after drying, g,

C = mass of aluminum dish, g,

For N012988-001A, % Moisture are calculated as follows:

$$\% \text{ Moisture} = ((2.2863-2.2364) / (2.2863-1.2857)) * 100$$

$$\% \text{ Moisture} = 4.987\%$$


7/29/2014

August 04, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012990

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 18, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012990

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Sample MW-853-059-Q3 was put on hold by the client. Please refer to the revised COC.

Analytical Comments for EPA 218.6_Low Level:

Matrix Spike (MS) on QC sample N012990-002AMS is outside recovery criteria however, it passed in the regular level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Dissolved Arsenic was greater than Total Arsenic by 0.0468ppb.



ASSET Laboratories

Date: 04-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012990
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012990-001A	MW-68C-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012990-001B	MW-68C-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012990-002A	MW-975-059-Q3	Water	7/18/2014 9:36:00 AM	7/18/2014	8/4/2014
N012990-002B	MW-975-059-Q3	Water	7/18/2014 9:36:00 AM	7/18/2014	8/4/2014
N012990-003A	MW-69D-059-Q3	Water	7/18/2014 1:01:00 PM	7/18/2014	8/4/2014
N012990-003B	MW-69D-059-Q3	Water	7/18/2014 1:01:00 PM	7/18/2014	8/4/2014
N012990-004A	MW-69S-059-Q3	Water	7/18/2014 1:11:00 PM	7/18/2014	8/4/2014
N012990-004B	MW-69S-059-Q3	Water	7/18/2014 1:11:00 PM	7/18/2014	8/4/2014
N012990-005A	MW-03-059-Q3	Water	7/18/2014 11:25:00 AM	7/18/2014	8/4/2014
N012990-005B	MW-03-059-Q3	Water	7/18/2014 11:25:00 AM	7/18/2014	8/4/2014
N012990-006A	MW-850-059-Q3	Water	7/18/2014 1:15:00 PM	7/18/2014	8/4/2014
N012990-007A	MW-07-059-Q3	Water	7/18/2014 9:25:00 AM	7/18/2014	8/4/2014
N012990-007B	MW-07-059-Q3	Water	7/18/2014 9:25:00 AM	7/18/2014	8/4/2014
N012990-007C	MW-07-059-Q3	Water	7/18/2014 9:25:00 AM	7/18/2014	8/4/2014
N012990-007D	MW-07-059-Q3	Water	7/18/2014 9:25:00 AM	7/18/2014	8/4/2014
N012990-008A	MW-72D-059-Q3	Water	7/18/2014 12:12:00 PM	7/18/2014	8/4/2014
N012990-008B	MW-72D-059-Q3	Water	7/18/2014 12:12:00 PM	7/18/2014	8/4/2014
N012990-009A	MW-72S-059-Q3	Water	7/18/2014 1:01:00 PM	7/18/2014	8/4/2014
N012990-009B	MW-72S-059-Q3	Water	7/18/2014 1:01:00 PM	7/18/2014	8/4/2014
N012990-010A	MW-79D-059-Q3	Water	7/18/2014 12:31:00 PM	7/18/2014	8/4/2014
N012990-010B	MW-79D-059-Q3	Water	7/18/2014 12:31:00 PM	7/18/2014	8/4/2014
N012990-011A	MW-79S-059-Q3	Water	7/18/2014 1:05:00 PM	7/18/2014	8/4/2014
N012990-011B	MW-79S-059-Q3	Water	7/18/2014 1:05:00 PM	7/18/2014	8/4/2014
N012990-012A	MW-162S3-059-Q3	Water	7/18/2014 8:45:00 AM	7/18/2014	8/4/2014
N012990-012B	MW-162S3-059-Q3	Water	7/18/2014 8:45:00 AM	7/18/2014	8/4/2014
N012990-013A	MW-163D-059-Q3	Water	7/18/2014 8:00:00 AM	7/18/2014	8/4/2014
N012990-013B	MW-163D-059-Q3	Water	7/18/2014 8:00:00 AM	7/18/2014	8/4/2014
N012990-014A	FWPGEMIX-059-Q3	Water	7/18/2014 9:41:00 AM	7/18/2014	8/4/2014
N012990-014B	FWPGEMIX-059-Q3	Water	7/18/2014 9:41:00 AM	7/18/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N012990
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012990-014C	FWPGEMIX-059-Q3	Water	7/18/2014 9:41:00 AM	7/18/2014	8/4/2014
N012990-014D	FWPGEMIX-059-Q3	Water	7/18/2014 9:41:00 AM	7/18/2014	8/4/2014
N012990-014E	FWPGEMIX-059-Q3	Water	7/18/2014 9:41:00 AM	7/18/2014	8/4/2014
N012990-015A	MW-851-059-Q3	Water	7/18/2014 12:45:00 PM	7/18/2014	8/4/2014
N012990-016A	MW-852-059-Q3	Water	7/18/2014 1:20:00 PM	7/18/2014	8/4/2014
N012990-017A	MW-853-059-Q3	Water	7/18/2014 1:00:00 PM	7/18/2014	8/4/2014



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-007

Client Sample ID: MW-07-059-Q3
Collection Date: 7/18/2014 9:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	960	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-014

Client Sample ID: FWPGEMIX-059-Q3
Collection Date: 7/18/2014 9:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140721D	QC Batch: 46106			PrepDate	7/21/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	340	10	10	mg/L	1	7/21/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46106	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: PBW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811024						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46106	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: LCSW	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		970.000	10	1000	0	97.0	80	120			

Sample ID N012977-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94239						
Client ID: ZZZZZ	Batch ID: 46106	TestNo: SM2540C		Analysis Date: 7/21/2014	SeqNo: 1811029						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3360.000	29					3414	1.60	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-001

Client Sample ID: MW-68C-059-Q3
Collection Date: 7/18/2014 9:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 02:27 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 11:54 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 12:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-002

Client Sample ID: MW-975-059-Q3
Collection Date: 7/18/2014 9:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 02:58 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 12:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 12:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-003

Client Sample ID: MW-69D-059-Q3
Collection Date: 7/18/2014 1:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/19/2014 12:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/24/2014 12:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-004

Client Sample ID: MW-69S-059-Q3
Collection Date: 7/18/2014 1:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/19/2014 01:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/24/2014 12:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-005

Client Sample ID: MW-03-059-Q3
Collection Date: 7/18/2014 11:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	13	0.016	0.20		µg/L	1	7/19/2014 01:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	12	0.030	1.0		µg/L	1	7/24/2014 12:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-006

Client Sample ID: MW-850-059-Q3
Collection Date: 7/18/2014 1:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 02:22 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-007

Client Sample ID: MW-07-059-Q3
Collection Date: 7/18/2014 9:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/19/2014 02:27 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/24/2014 12:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-008

Client Sample ID: MW-72D-059-Q3
Collection Date: 7/18/2014 12:12:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 03:40 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 02:46 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 01:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-009

Client Sample ID: MW-72S-059-Q3
Collection Date: 7/18/2014 1:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	4.7	0.016	0.20		µg/L	1	7/19/2014 03:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	4.3	0.030	1.0		µg/L	1	7/24/2014 01:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-010

Client Sample ID: MW-79D-059-Q3
Collection Date: 7/18/2014 12:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 04:00 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 03:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 01:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-011

Client Sample ID: MW-79S-059-Q3
Collection Date: 7/18/2014 1:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	5.3	0.016	0.20		µg/L	1	7/19/2014 04:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	5.3	0.030	1.0		µg/L	1	7/24/2014 01:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-012

Client Sample ID: MW-162S3-059-Q3
Collection Date: 7/18/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	0.061	0.012	0.060		µg/L	1	7/25/2014 04:21 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 04:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 01:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-013

Client Sample ID: MW-163D-059-Q3
Collection Date: 7/18/2014 8:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 04:42 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 04:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-014

Client Sample ID: FWPGEMIX-059-Q3
Collection Date: 7/18/2014 9:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	0.69	0.016	0.20		µg/L	1	7/19/2014 05:27 PM

ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140724B	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 11:51 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 01:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-015

Client Sample ID: MW-851-059-Q3
Collection Date: 7/18/2014 12:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 05:03 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 05:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-016

Client Sample ID: MW-852-059-Q3
Collection Date: 7/18/2014 1:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 02:43 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 06:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94251	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: PBW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812086
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94251	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: LCSW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812087
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.212	0.060	0.2000	0	106 90 110
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Sample ID N012968-009ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812089
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.381	0.060			0.3788 0.679 20
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Sample ID N012977-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812092
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.206	0.060	0.2000	0	103 90 110
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Sample ID N012992-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812094
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.235	0.060	0.2000	0.01742	109 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012992-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.237	0.060	0.2000	0.01742	110	90	110	0.2348	0.792	20	

Sample ID N012992-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				S

Sample ID N012993-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812101						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012993-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812103						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012990-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812105						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01758	97.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812107						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.227	0.060	0.2000	0.01841	104	90	110				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110	0.2177	0.113	20	

Sample ID N012990-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0	110	90	110				S

Sample ID N012990-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813823						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.229	0.060	0.2000	0.01365	107	90	110				

Sample ID N012990-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.224	0.060	0.2000	0.01237	106	90	110				

Sample ID N012990-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.267	0.060	0.2000	0.06129	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.01562	105	90	110				

Sample ID N012990-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813831						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012929-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813835						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01203	104	90	110				

Sample ID N013004-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N013004-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813839						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013004-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813841							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01332	101	90	110				

Sample ID N013004-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94227	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: PBW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94227	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: LCSW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.958	0.20	5.000	0	99.2	90	110				
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Sample ID N012990-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.017	0.20						0.01670	0	20	
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Sample ID N012990-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.028	0.20	1.000	0.01670	101	90	110				
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Sample ID N012990-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810456						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.000	0.20	1.000	0.01670	98.3	90	110	1.028	2.79	20	
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0.01930	97.6	90	110				

Sample ID N012990-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.048	0.20	1.000	1.057	99.2	90	110				

Sample ID N012990-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810464						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.760	0.20	1.000	1.754	101	90	110				

Sample ID N012990-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.007	0.20	1.000	0	101	90	110				

Sample ID N012990-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.366	0.20	1.000	1.389	97.7	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810471						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.008	0.20	1.000	0.01690	99.1	90	110				

Sample ID N012990-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.709	0.20	5.000	4.660	101	90	110				

Sample ID N012990-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID N012990-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810479						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.333	0.20	5.000	5.320	100	90	110				

Sample ID N012990-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0.02710	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0	103	90	110				

Sample ID N012990-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.695	0.20	1.000	0.6940	100	90	110				

Sample ID N012990-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810489						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N012990-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810491						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID N012977-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012992-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810498							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.015	0.20	1.000	0	101	90	110				

Sample ID N012992-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810500							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.474	0.20	5.000	11.69	95.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_CRPGE

Sample ID MB-46115	SampType: MBLK	TestCode: 6020_W_CRP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331						
Client ID: PBW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814578						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46115	SampType: LCS	TestCode: 6020_W_CRP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331						
Client ID: LCSW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814581						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.022 1.0 10.00 0 100 85 115

Sample ID N012990-014C-MS	SampType: MS	TestCode: 6020_W_CRP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814585						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.310 1.0 10.00 0.7469 95.6 75 125

Sample ID N012990-014C-MSD	SampType: MSD	TestCode: 6020_W_CRP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814586						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.313 1.0 10.00 0.7469 95.7 75 125 10.31 0.0225 20

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46115	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: PBW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814443						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46115	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: LCSW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814446						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.022 1.0 10.00 0 100 85 115

Sample ID N012990-014C-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814450						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.310 1.0 10.00 0.7469 95.6 75 125

Sample ID N012990-014C-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.313 1.0 10.00 0.7469 95.7 75 125 10.31 0.0225 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	FWPGEMIX-059-Q3
Lab Order:	N012990	Collection Date:	7/18/2014 9:41:00 AM
Project:	PGE Hinkley, 492581.UR.SW.FW	Matrix:	WATER
Lab ID:	N012990-014		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217	PrepDate	Analyst: PS
Nitrate as N	0.77 0.0051	0.050 mg/L	1 7/19/2014 11:35 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94217_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94217			
Client ID:	PBW	Batch ID:	R94217	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809640			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID	LCS-R94217_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94217			
Client ID:	LCSW	Batch ID:	R94217	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809641			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 1.067 0.050 1.000 0 107 90 110

Sample ID	N012992-010C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94217			
Client ID:	ZZZZZ	Batch ID:	R94217	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809665			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 18.040 1.0 18.04 0 20

Sample ID	N012992-016C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94217			
Client ID:	ZZZZZ	Batch ID:	R94217	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809666			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 6.880 0.50 7.350 6.61 20

Sample ID	N012992-010C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94217			
Client ID:	ZZZZZ	Batch ID:	R94217	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809667			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 38.920 1.0 20.00 18.04 104 80 120

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012992-016C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.170	0.50	10.00	7.350	98.2	80	120				

Sample ID N012992-016C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809669						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.310	0.50	10.00	7.350	99.6	80	120	17.17	0.812	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-007

Client Sample ID: MW-07-059-Q3
Collection Date: 7/18/2014 9:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate		Analyst: PS
Organic Carbon, Total	1.0	0.041	1.0	mg/L	1	7/19/2014 10:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94219	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: PBW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94219	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: LCSW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810026						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.696 1.0 10.00 0 107 85 115

Sample ID N012965-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.539 1.0 10.00 0.1124 104 75 125

Sample ID N012965-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219						
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810028						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.365 1.0 10.00 0.1124 103 75 125 10.54 1.67 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N012990-014

Client Sample ID: FWPGEMIX-059-Q3
Collection Date: 7/18/2014 9:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140724B	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Arsenic	0.85	0.027	0.10		µg/L	1	7/24/2014 11:51 AM

DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46115				PrepDate	7/21/2014	Analyst: CEI
Arsenic	0.89	0.027	0.10		µg/L	1	7/24/2014 01:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_AsPGE

Sample ID MB-46115	SampType: MBLK	TestCode: 6020_W_AsP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331
Client ID: PBW	Batch ID: 46115	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1814548
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	ND	0.10			
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Sample ID LCS-46115	SampType: LCS	TestCode: 6020_W_AsP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331
Client ID: LCSW	Batch ID: 46115	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1814551
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	10.220	0.10	10.00	0	102 85 115
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Sample ID N012990-014C-MS	SampType: MS	TestCode: 6020_W_AsP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331
Client ID: ZZZZZ	Batch ID: 46115	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1814555
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	11.078	0.10	10.00	0.8480	102 75 125
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Sample ID N012990-014C-MSD	SampType: MSD	TestCode: 6020_W_AsP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94331
Client ID: ZZZZZ	Batch ID: 46115	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1814556
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Arsenic	11.082	0.10	10.00	0.8480	102 75 125 11.08 0.0356 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46115	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: PBW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814768						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic ND 0.10

Sample ID LCS-46115	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: LCSW	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814771						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic 10.220 0.10 10.00 0 102 85 115

Sample ID N012990-014C-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic 11.078 0.10 10.00 0.8480 102 75 125

Sample ID N012990-014C-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic 11.082 0.10 10.00 0.8480 102 75 125 11.08 0.0356 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C	Field Field Field Field Field NA Field Field Field Field NA NA NA	28 180 180 180 180 180 2 2 2 2 7 7 28	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF, Ca, Fe, K, Mg, Na Metals Dissolved (6020AFF) FF, As, Cr Metals Dissolved (6020AFF) FF, As, Cr, Mn Metals Dissolved (6020AFF) FF, Cr Metals (6020A) As, Cr Anions (E300.0) FF, NO3N Anions (E300.0) FF, NO3N, SO4 Anions (E300.0) FF, NO3N, SO4, Cl Ortho-Phosphate (E300.0) FF TDS (SM2540C) Alkalinity (SM2320B) TOC (E5310)	Number of Containers COMMENTS								
SAMPLE ID	DATE	TIME	Matrix														
MW-851-059-Q3	7/18/2014	1245	Water	X												1	LB
MW-852-059-Q3	7/18/2014	1320	Water	X												1	TH
MW-853-059-Q3	7/18/2014	1300	Water	X												1	MD
TOTAL NUMBER OF CONTAINERS															3		

Approved by <i>H. Blair</i> Sampled by <i>Spencer Doolittle</i> Relinquished by <i>SD</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/15/14 1500 7/15/14 1500 7/15/14 1500	Shipping Details Method of Shipment: On Ice: (yes) / no 3-3°C Airbill No: 1R#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
Location Hinkley				Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C		
Project Number 492581.UR.SW.FW				Filtered:	Field	Field	Field	NA	Field	NA	NA		
Project Manager Jennifer Low				Holding Time (days):	28	180	180	180	2	7	28		
Sample Manager Jim Hanvey					Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF As, Cr	Metals Dissolved (6020AFF) FF Cr	Metals (6020A) As, Cr	Anions (E300.0) FF NO3N	TDS (SM2540C)	TOC (E5310)		
Cell Number (404) 229-2181													
Fax Number (510) 622-9136													
Task Order 59													
Project 2014-GMP-059-Q3													
Turnaround Time 10 Days													
Shipping Date:													
COC Number:													
SAMPLE ID	DATE	TIME	Matrix										
MW-68C-059-Q3	7/18/2014	0926	Water	X		X						2	JM
MW-975-059-Q3	7/18/2014	0936	Water	X		X						2	JM
MW-69D-059-Q3	7/18/2014	1301	Water	X		X						2	JM
MW-69S-059-Q3	7/18/2014	1311	Water	X		X						2	TH
MW-03-059-Q3	7/18/2014	1125	Water	X		X						2	JD
MW-850-059-Q3	7/18/2014	1315	Water	X								1	SD
MW-07-059-Q3	7/18/2014	0925	Water	X		X			X	X		6	LB
MW-72D-059-Q3	7/18/2014	1212	Water	X		X						2	SD
MW-72S-059-Q3	7/18/2014	1301	Water	X		X						2	SD
MW-79D-059-Q3	7/18/2014	1231	Water	X		X						2	LB
MW-79S-059-Q3	7/18/2014	1305	Water	X		X						2	MD
MW-162S3-059-Q3	7/18/2014	0845	Water	X		X						2	SD
MW-163D-059-Q3	7/18/2014	0800	Water	X		X						2	SD
FWPGE MIX-059-Q3	7/18/2014	0941	Water	X	X		X	X	X	X		5	TH
TOTAL NUMBER OF CONTAINERS												34	

N012990-1

-2
-3
-4
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-16

Approved by	<i>H. Blum</i>	Signatures	Date/Time	7/18/14 1500	Shipping Details	Method of Shipment:	ATTN:	Special Instructions:
Sampled by	<i>Spencer Dositth</i>		7/18/14 1500		On Ice: (yes) / no	3, 7°C		Report Copy to:
Relinquished by	<i>Spencer Dositth</i>		7/18/14 1500		Airbill No:			Shawn Duffy
Received by	<i>Spencer Dositth</i>		7/18/14 1500		Lab Name: Advanced Technology Laboratories			(530) 941-9227
Relinquished by	<i>Spencer Dositth</i>		7/15/14 1500		Lab Phone: (702) 307-2659			2525 Airpark Drive, Redding, CA 96001
Received by	<i>Spencer Dositth</i>		7/15/14 1500					

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 500 ml Poly HNO3, 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 1000ml Poly 4°C 3X40 ml VOA H2SO4, 4°C	Field Field Field Field Field NA Field Field Field Field NA NA NA	28 180 180 180 180 180 2 2 2 2 7 7 28	Cr(VI) (E218.6) FF Metals Dissolved (6010BDIs) FF Ca,Fe,K,Mg,Na Metals Dissolved (6020AFF) FF As,Cr Metals Dissolved (6020AFF) FF As,Cr,Mn Metals Dissolved (6020AFF) FF Cr Metals (6020A) As,Cr Anions (E300.0) FF NO3N Anions (E300.0) FF NO3N,SO4 Anions (E300.0) FF NO3N,SO4,Cl Ortho-Phosphate (E300.0) FF TDS (SM2540C) Alkalinity (SM2320B) TOC (E5310)	Number of Containers COMMENTS									
SAMPLE ID	DATE	TIME	Matrix															
MW-851-059-Q3	7/18/2014	1245	Water	X													1	LB
MW-852-059-Q3	7/18/2014	1320	Water	X													1	TH
MW-853-059-Q3	7/18/2014	1300	Water	X													1	MD
													TOTAL NUMBER OF CONTAINERS		3			

Approved by <i>H. Blair</i> Sampled by <i>Spencer Doolittle</i> Relinquished by <i>SD</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/15/14 1500 7/15/14 1500 7/15/14 1500	Shipping Details Method of Shipment: On Ice: (yes) / no 3-3°C Airbill No: 1R#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

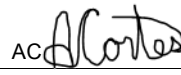
If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/18/2014 Workorder: N012990
 Rep sample Temp (Deg C): 3.7/3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| Was Client notified? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |

Comments See email.

Checklist Completed B AC  7/21/2014

Reviewed By:  07/22/14

amanda.cortes@assetlaboratories.com

From: amanda.cortes@assetlaboratories.com
Sent: Monday, July 21, 2014 11:05 AM
To: 'Jim.Hanvey@CH2M.com'
Cc: 'Erlene.Contreras@CH2M.com'; 'Priya.Kumar@CH2M.com'; 'Katherine.Blinn@ch2m.com'; 'rsunjara@blainetech.com'; 'marlon@atl-labs.com'; 'samplecontrol.lv@assetlaboratories.com'
Subject: RE: ATU-SOIL, GMP bottle

Thank you, Jim.

I will make sure that all necessary changes are made per your corrections.

Thank you,
Amanda

From: Jim.Hanvey@CH2M.com [<mailto:Jim.Hanvey@CH2M.com>]
Sent: Monday, July 21, 2014 11:01 AM
To: amanda.cortes@assetlaboratories.com
Cc: Erlene.Contreras@CH2M.com; Priya.Kumar@CH2M.com; Katherine.Blinn@ch2m.com; rsunjara@blainetech.com
Subject: RE: ATU-SOIL, GMP bottle

Amanda:
Please revise the attached Chains of Custody per the markup.
Thanks,
Jim
Jim Hanvey
Project Consultant

CH2MHILL
155 Grand Avenue, Suite 800
Oakland, CA 94612
(e) Jim.Hanvey@ch2m.com
(p) 510.587.7631 (direct)
(f) 510.622.9136
(c) 404.229.2181

From: amanda.cortes@assetlaboratories.com [<mailto:amanda.cortes@assetlaboratories.com>]
Sent: Monday, July 21, 2014 9:57 AM
To: Hanvey, Jim/BAO
Cc: marlon@atl-labs.com; samplecontrol.lv@assetlaboratories.com
Subject: ATU-SOIL, GMP bottle

Hello, Jim.

Please advise on the following:

- 1) Two samples are named the same on the ATU-SOIL COC (RAN-SOIL-2_0-0.5_). However, on the sample containers, one is named RAN-SOIL-2-5-5.5_; please reference attached COC.
- 2) For GMP samples, one sample for Cr+6 was received in a metals container preserved in HNO3. The sample ID is MW-853-059-Q3. Please reference attached COC.

Thank you,

Amanda M. Cortes

Sample Control Officer

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 Ext. 404 | F: 702.307.2691 | M: 702.882.7341

California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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Thank you.

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012990-007C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.6313-60.5348)*1000000}{100}$$

965 mg/L

Reporting result in two significant figures,

$$\text{TDS} = \frac{960}{960} \text{ mg/L}$$

MC7/23/14

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/21/2014								TDS/CONDUCTIVITY
Date Finished: 7/22/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46106	100	64.1088	64.1091	3	1	3.00		
LCS-46106	100	63.5089	63.6059	970	1	970.00		
N012974-001C	100	63.3747	63.4042	295	1	295.00	390	0.76
N012975-016D	100	63.7999	63.8702	703	1	703.00	988	0.71
N012977-001D	35	63.9748	64.0943	1195	2.8571429	3414.29	4040	0.85
N012977-001D-DUP	35	63.9959	64.1135	1176	2.8571429	3360.00	4040	0.83
N012977-002D	35	62.9967	63.1105	1138	2.8571429	3251.43	4040	0.80
N012977-003D	100	63.7809	63.9274	1465	1	1465.00	2040	0.72
N012977-004D	100	64.2745	64.5694	2949	1	2949.00	3820	0.77
N012977-005D	100	61.3654	61.4955	1301	1	1301.00	1840	0.71
N012977-006D	100	60.6371	60.7374	1003	1	1003.00	1633	0.61
N012977-007D	100	61.7311	61.8371	1060	1	1060.00	1607	0.66
N012977-008D	100	60.8359	60.9544	1185	1	1185.00	1732	0.68
N012977-009C	70	61.1351	61.2455	1104	1.4285714	1577.14	2130	0.74
N012977-010C	65	64.2554	64.3676	1122	1.5384615	1726.15	2320	0.74
N012977-011D	100	61.6737	61.7962	1225	1	1225.00	1739	0.70
N012990-007C	100	60.5348	60.6313	965	1	965.00	1466	0.66
N012990-014E	100	60.7711	60.8051	340	1	340.00	487	0.70

Jmer
7/23/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012990-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.017579 * 1 \\ &= 0.017579\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/1/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012990-005A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 12.5583 * 1 \\ &= 12.5583 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 13$$

Murphy 8/1/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012990-014D** concentration in mg/L is calculated as follows:

$$\begin{aligned}\text{Nitrate, mg/L} &= 0.77 * 1 \\ &= 0.77\end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 0.77$$

 8/4/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012990-007D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [1.12500] [1] - 0.08490$$

$$\text{TOC} = 1.04010$$

Reporting results in two significant figures,

$$\text{TOC} = 1.00 \text{ mg/L}$$

PS 8/1/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012990-014C**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 0.84797879972 * 1 * (25/25) \\ &= 0.84797879972 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = \mathbf{0.85}$$



8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012990
Test Method: EPA 6020
Analysis Date: 7/24/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46115

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr and As. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012990-014C-DT 5X	Chromium	µg/L	0.7662093	NA	0.746926	2.58%	10
N012990-014C-DT 5X	Arsenic	µg/L	0.9010629	NA	0.8479788	6.26%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_AsPGE

Sample ID: N012990-014C-PS	SampType: PS	TestCode: 6020_W_AsP	Units: µg/L	Prep Date:	RunNo: 94331						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814554						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.056	0.20	20.00	0.8480	106	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_CRPGE

Sample ID: N012990-014C-PS	SampType: PS	TestCode: 6020_W_CRP	Units: µg/L	Prep Date:	RunNo: 94331						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814584						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.559	2.0	20.00	0.7469	99.1	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values

H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012990-014B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 0.89479770413 * 1 * (25/25) \\ &= 0.89479770413 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 0.89$$

 8/1/2014

CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012990-014C-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46115	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814449						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	20.559	2.0	20.00	0.7469	99.1	80	120				
----------	--------	-----	-------	--------	------	----	-----	--	--	--	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N012990
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012990-014C-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: R94330	TestNo: EPA 6020		Analysis Date: 7/24/2014	SeqNo: 1814774						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.056	0.20	20.00	0.8480	106	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values

H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

August 04, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012992

RE: PGE Hinkley, 492581.UR.AU.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 18, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012992

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 218.6_Low Level:

Matrix Spike (MS) on QC sample N012992--018AMS is outside recovery criteria however, it passed in the regular level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.392 ug/L) and hexavalent chromium (1.6362 ug/L) for sample N012992-003 (MW-68S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.708 and 1.713 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.506 ug/L) and hexavalent chromium (0.563 ug/L)



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012992

CASE NARRATIVE

for sample N012992-014 (G-2R-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.620 and 0.725 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 04-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012992
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012992-001A	MW-781-059-Q3	Water	7/18/2014 1:15:00 PM	7/18/2014	8/4/2014
N012992-002A	MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	7/18/2014	8/4/2014
N012992-002B	MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	7/18/2014	8/4/2014
N012992-002C	MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	7/18/2014	8/4/2014
N012992-002D	MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	7/18/2014	8/4/2014
N012992-002E	MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	7/18/2014	8/4/2014
N012992-003A	MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	7/18/2014	8/4/2014
N012992-003B	MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	7/18/2014	8/4/2014
N012992-003C	MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	7/18/2014	8/4/2014
N012992-003D	MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	7/18/2014	8/4/2014
N012992-003E	MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	7/18/2014	8/4/2014
N012992-004A	MW-14B-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-004B	MW-14B-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-004C	MW-14B-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-004D	MW-14B-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-004E	MW-14B-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-005A	MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	7/18/2014	8/4/2014
N012992-005B	MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	7/18/2014	8/4/2014
N012992-005C	MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	7/18/2014	8/4/2014
N012992-005D	MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	7/18/2014	8/4/2014
N012992-005E	MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	7/18/2014	8/4/2014
N012992-006A	MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	7/18/2014	8/4/2014
N012992-006B	MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	7/18/2014	8/4/2014
N012992-006C	MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	7/18/2014	8/4/2014
N012992-006D	MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	7/18/2014	8/4/2014
N012992-006E	MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	7/18/2014	8/4/2014
N012992-007A	EX-27-059-Q3	Water	7/18/2014 12:06:00 PM	7/18/2014	8/4/2014
N012992-007B	EX-27-059-Q3	Water	7/18/2014 12:06:00 PM	7/18/2014	8/4/2014
N012992-007C	EX-27-059-Q3	Water	7/18/2014 12:06:00 PM	7/18/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012992
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012992-008A	EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012992-008B	EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012992-008C	EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012992-008D	EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012992-008E	EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012992-009A	EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	7/18/2014	8/4/2014
N012992-009B	EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	7/18/2014	8/4/2014
N012992-009C	EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	7/18/2014	8/4/2014
N012992-009D	EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	7/18/2014	8/4/2014
N012992-009E	EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	7/18/2014	8/4/2014
N012992-010A	EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	7/18/2014	8/4/2014
N012992-010B	EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	7/18/2014	8/4/2014
N012992-010C	EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	7/18/2014	8/4/2014
N012992-010D	EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	7/18/2014	8/4/2014
N012992-010E	EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	7/18/2014	8/4/2014
N012992-011A	EX-34-059-Q3	Water	7/18/2014 9:21:00 AM	7/18/2014	8/4/2014
N012992-011B	EX-34-059-Q3	Water	7/18/2014 9:21:00 AM	7/18/2014	8/4/2014
N012992-011C	EX-34-059-Q3	Water	7/18/2014 9:21:00 AM	7/18/2014	8/4/2014
N012992-012A	EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	7/18/2014	8/4/2014
N012992-012B	EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	7/18/2014	8/4/2014
N012992-012C	EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	7/18/2014	8/4/2014
N012992-012D	EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	7/18/2014	8/4/2014
N012992-012E	EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	7/18/2014	8/4/2014
N012992-013A	G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012992-013B	G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012992-013C	G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012992-013D	G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012992-013E	G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	7/18/2014	8/4/2014
N012992-014A	G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-014B	G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N012992
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012992-014C	G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-014D	G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-014E	G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	7/18/2014	8/4/2014
N012992-015A	MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	7/18/2014	8/4/2014
N012992-015B	MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	7/18/2014	8/4/2014
N012992-015C	MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	7/18/2014	8/4/2014
N012992-015D	MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	7/18/2014	8/4/2014
N012992-015E	MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	7/18/2014	8/4/2014
N012992-016A	G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	7/18/2014	8/4/2014
N012992-016B	G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	7/18/2014	8/4/2014
N012992-016C	G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	7/18/2014	8/4/2014
N012992-016D	G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	7/18/2014	8/4/2014
N012992-016E	G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	7/18/2014	8/4/2014
N012992-017A	GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	7/18/2014	8/4/2014
N012992-017B	GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	7/18/2014	8/4/2014
N012992-017C	GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	7/18/2014	8/4/2014
N012992-017D	GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	7/18/2014	8/4/2014
N012992-017E	GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	7/18/2014	8/4/2014
N012992-018A	GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	7/18/2014	8/4/2014
N012992-018B	GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	7/18/2014	8/4/2014
N012992-018C	GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	7/18/2014	8/4/2014
N012992-018D	GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	7/18/2014	8/4/2014
N012992-018E	GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	7/18/2014	8/4/2014



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-002

Client Sample ID: MW-68D-059-Q3
Collection Date: 7/18/2014 11:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1800	17	17	mg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-003

Client Sample ID: MW-68S-059-Q3
Collection Date: 7/18/2014 10:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3800	33	33	mg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-004

Client Sample ID: MW-14B-059-Q3
Collection Date: 7/18/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107				PrepDate: 7/22/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	640	10	10		mg/L	1	7/22/2014 08:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-005

Client Sample ID: MW-71D-059-Q3
Collection Date: 7/18/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2700	25	25	mg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-71S-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate: 7/22/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	5700	50	50	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-31-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:51:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate: 7/22/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1400	10	10	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** EX-32-059-Q3
Lab Order: N012992 **Collection Date:** 7/18/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012992-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140722D** QC Batch: **46107** PrepDate: **7/22/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 1400 10 10 mg/L 1 7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-33-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate: 7/22/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3100	25	25	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-35-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:11:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate: 7/22/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3000	25	25	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-1R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 9:26:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	4400	33	33	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-2R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	5200	40	40	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-015

Client Sample ID: MW-953-059-Q3
Collection Date: 7/18/2014 8:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	5200	40	40	mg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-5R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-017

Client Sample ID: GPVTN-059-Q3
Collection Date: 7/18/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2800	22	22	mg/L	1	7/22/2014 08:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: GPVTS-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-018	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140722D	QC Batch: 46107			PrepDate	7/22/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2000	18	18	mg/L	1	7/22/2014 08:10 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46107	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/22/2014	RunNo: 94260						
Client ID: PBW	Batch ID: 46107	TestNo: SM2540C		Analysis Date: 7/22/2014	SeqNo: 1811965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46107	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/22/2014	RunNo: 94260						
Client ID: LCSW	Batch ID: 46107	TestNo: SM2540C		Analysis Date: 7/22/2014	SeqNo: 1811966						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		963.000	10	1000	0	96.3	80	120			

Sample ID N012992-002D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/22/2014	RunNo: 94260						
Client ID: ZZZZZ	Batch ID: 46107	TestNo: SM2540C		Analysis Date: 7/22/2014	SeqNo: 1811968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		1795.000	17					1763	1.78	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-002

Client Sample ID: MW-68D-059-Q3
Collection Date: 7/18/2014 11:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	50	0.011	0.67	pCi/L	1	7/29/2014 12:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-003

Client Sample ID: MW-68S-059-Q3
Collection Date: 7/18/2014 10:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	55	0.011	0.67	pCi/L	1	7/29/2014 12:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-004

Client Sample ID: MW-14B-059-Q3
Collection Date: 7/18/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	27	0.011	0.67	pCi/L	1	7/29/2014 01:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-005

Client Sample ID: MW-71D-059-Q3
Collection Date: 7/18/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	49	0.011	0.67	pCi/L	1	7/29/2014 01:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-006

Client Sample ID: MW-71S-059-Q3
Collection Date: 7/18/2014 10:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119				PrepDate: 7/21/2014		Analyst: CEI
Uranium	97	0.057	3.4		pCi/L	5	7/29/2014 03:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-27-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 12:06:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	110	0.057	3.4	pCi/L	5	7/29/2014 03:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-31-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:51:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	33	0.011	0.67	pCi/L	1	7/29/2014 01:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-32-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	22	0.011	0.67	pCi/L	1	7/29/2014 01:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-33-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	43	0.011	0.67	pCi/L	1	7/29/2014 01:45 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-34-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 9:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	45	0.011	0.67	pCi/L	1	7/29/2014 01:51 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-012

Client Sample ID: EX-35-059-Q3
Collection Date: 7/18/2014 8:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119				PrepDate: 7/21/2014		Analyst: CEI
Uranium	40	0.011	0.67		pCi/L	1	7/29/2014 01:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-013

Client Sample ID: G-1R-059-Q3
Collection Date: 7/18/2014 9:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119				PrepDate: 7/21/2014	Analyst: CEI	
Uranium	37	0.057	3.4		pCi/L	5	7/29/2014 03:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-2R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	53	0.057	3.4	pCi/L	5	7/29/2014 03:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-015

Client Sample ID: MW-953-059-Q3
Collection Date: 7/18/2014 8:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	55	0.057	3.4	pCi/L	5	7/29/2014 03:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-5R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate: 7/21/2014		Analyst: CEI
Uranium	18	0.057	3.4	pCi/L	5	7/29/2014 03:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-017

Client Sample ID: GPVTN-059-Q3
Collection Date: 7/18/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119			PrepDate	7/21/2014	Analyst: CEI
Uranium	36	0.057	3.4	pCi/L	5	7/29/2014 03:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-018

Client Sample ID: GPVTS-059-Q3
Collection Date: 7/18/2014 11:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140729A	QC Batch: 46119				PrepDate: 7/21/2014		Analyst: CEI
Uranium	43	0.057	3.4		pCi/L	5	7/29/2014 03:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46119	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94342						
Client ID: PBW	Batch ID: 46119	TestNo: EPA 200.8		Analysis Date: 7/29/2014	SeqNo: 1815033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	ND	0.67									

Sample ID LCS-46119	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94342						
Client ID: LCSW	Batch ID: 46119	TestNo: EPA 200.8		Analysis Date: 7/29/2014	SeqNo: 1815034						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	7.159	0.67	6.700	0	107	85	115				

Sample ID N012992-003B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94342						
Client ID: ZZZZZ	Batch ID: 46119	TestNo: EPA 200.8		Analysis Date: 7/29/2014	SeqNo: 1815039						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	64.643	0.67	6.700	54.91	145	75	125				S

Sample ID N012992-012B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94342						
Client ID: ZZZZZ	Batch ID: 46119	TestNo: EPA 200.8		Analysis Date: 7/29/2014	SeqNo: 1815052						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	44.043	0.67	6.700	40.31	55.7	75	125				S

Sample ID N012992-003B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/21/2014	RunNo: 94342						
Client ID: ZZZZZ	Batch ID: 46119	TestNo: EPA 200.8		Analysis Date: 7/29/2014	SeqNo: 1815071						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	56.401	0.67	6.700	54.91	22.3	75	125	64.64	13.6	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-001

Client Sample ID: MW-781-059-Q3
Collection Date: 7/18/2014 1:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 12:25 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/19/2014 07:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-002

Client Sample ID: MW-68D-059-Q3
Collection Date: 7/18/2014 11:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719A	QC Batch: R94227				PrepDate		Analyst: RB
Hexavalent Chromium	12	0.016	0.20		µg/L	1	7/19/2014 07:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	11	0.030	1.0		µg/L	1	7/24/2014 02:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-003

Client Sample ID: MW-68S-059-Q3
Collection Date: 7/18/2014 10:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/19/2014 08:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/24/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-004

Client Sample ID: MW-14B-059-Q3
Collection Date: 7/18/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	35	0.080	1.0		µg/L	5	7/20/2014 03:08 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	32	0.030	1.0		µg/L	1	7/24/2014 02:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-005

Client Sample ID: MW-71D-059-Q3
Collection Date: 7/18/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/19/2014 09:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/24/2014 02:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-006

Client Sample ID: MW-71S-059-Q3
Collection Date: 7/18/2014 10:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/19/2014 10:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/24/2014 02:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-27-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 12:06:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228			PrepDate			Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20	µg/L	1		7/19/2014 10:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-008

Client Sample ID: EX-31-059-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	4.3	0.016	0.20		µg/L	1	7/19/2014 11:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	7/24/2014 03:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-009

Client Sample ID: EX-32-059-Q3
Collection Date: 7/18/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/19/2014 11:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/24/2014 03:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-010

Client Sample ID: EX-33-059-Q3
Collection Date: 7/18/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/19/2014 11:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	4.2	0.030	1.0		µg/L	1	7/24/2014 03:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-011

Client Sample ID: EX-34-059-Q3
Collection Date: 7/18/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228			PrepDate			Analyst: RB
Hexavalent Chromium	21	0.032	0.40		µg/L	2	7/20/2014 03:18 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-012

Client Sample ID: EX-35-059-Q3
Collection Date: 7/18/2014 8:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/20/2014 12:18 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	7/24/2014 03:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-013

Client Sample ID: G-1R-059-Q3
Collection Date: 7/18/2014 9:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/20/2014 12:56 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	7/24/2014 03:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-014

Client Sample ID: G-2R-059-Q3
Collection Date: 7/18/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	0.54	0.016	0.20		µg/L	1	7/20/2014 01:15 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/24/2014 03:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-015

Client Sample ID: MW-953-059-Q3
Collection Date: 7/18/2014 8:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/20/2014 01:34 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/24/2014 03:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-016

Client Sample ID: G-5R-059-Q3
Collection Date: 7/18/2014 10:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	3.6	0.016	0.20		µg/L	1	7/20/2014 01:53 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	7/24/2014 03:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-017

Client Sample ID: GPVTN-059-Q3
Collection Date: 7/18/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140719B	QC Batch: R94228				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/20/2014 02:12 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/24/2014 03:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-018

Client Sample ID: GPVTS-059-Q3
Collection Date: 7/18/2014 11:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 01:19 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140721A	QC Batch: R94246				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/21/2014 04:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46116				PrepDate	7/21/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/24/2014 03:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94251	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: PBW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812086
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94251	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: LCSW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812087
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106 90 110

Sample ID N012968-009ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812089
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.381	0.060			0.3788 0.679 20

Sample ID N012977-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812092
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.206	0.060	0.2000	0	103 90 110

Sample ID N012992-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812094
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.235	0.060	0.2000	0.01742	109 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012992-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.237	0.060	0.2000	0.01742	110	90	110	0.2348	0.792	20	

Sample ID N012992-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				S

Sample ID N012993-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812101						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012993-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812103						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012990-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812105						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01758	97.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812107						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.227	0.060	0.2000	0.01841	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94227	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: PBW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94227	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: LCSW	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.958	0.20	5.000	0	99.2	90	110				
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Sample ID N012990-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.017	0.20						0.01670	0	20	
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Sample ID N012990-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.028	0.20	1.000	0.01670	101	90	110				
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Sample ID N012990-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810456						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.000	0.20	1.000	0.01670	98.3	90	110	1.028	2.79	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0.01930	97.6	90	110				

Sample ID N012990-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.048	0.20	1.000	1.057	99.2	90	110				

Sample ID N012990-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810464						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.760	0.20	1.000	1.754	101	90	110				

Sample ID N012990-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.007	0.20	1.000	0	101	90	110				

Sample ID N012990-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.366	0.20	1.000	1.389	97.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810471						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.008	0.20	1.000	0.01690	99.1	90	110				

Sample ID N012990-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.709	0.20	5.000	4.660	101	90	110				

Sample ID N012990-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID N012990-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810479						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.333	0.20	5.000	5.320	100	90	110				

Sample ID N012990-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0.02710	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012990-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0	103	90	110				

Sample ID N012990-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.695	0.20	1.000	0.6940	100	90	110				

Sample ID N012990-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810489						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N012990-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810491						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID N012977-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012992-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810498							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.015	0.20	1.000	0	101	90	110				

Sample ID N012992-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94227						
Client ID: ZZZZZZ	Batch ID: R94227	TestNo: EPA 218.6	Analysis Date: 7/19/2014	SeqNo: 1810500							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.474	0.20	5.000	11.69	95.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012992-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810522						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.314	0.20	1.000	2.255	106	90	110				

Sample ID N012992-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.348	0.20	1.000	1.320	103	90	110				

Sample ID N012992-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810526						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.376	0.20	1.000	1.332	104	90	110				

Sample ID N012992-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810530						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.311	0.20	5.000	4.302	100	90	110				

Sample ID N012992-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810532						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.026	0.20	5.000	2.066	99.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012992-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/19/2014	SeqNo: 1810534						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.448	0.20	5.000	4.441	100	90	110				

Sample ID N012992-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/20/2014	SeqNo: 1810536						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.826	0.20	5.000	2.826	100	90	110				

Sample ID N012992-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/20/2014	SeqNo: 1810540						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.334	0.20	5.000	1.322	100	90	110				

Sample ID N012992-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/20/2014	SeqNo: 1810542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.537	0.20	5.000	0.5363	100	90	110				

Sample ID N012992-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6		Analysis Date: 7/20/2014	SeqNo: 1810544						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.222	0.20	5.000	1.228	99.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012992-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6	Analysis Date: 7/20/2014	SeqNo: 1810546							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.671	0.20	5.000	3.597	101	90	110				

Sample ID N012992-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94228						
Client ID: ZZZZZZ	Batch ID: R94228	TestNo: EPA 218.6	Analysis Date: 7/20/2014	SeqNo: 1810548							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.909	0.20	5.000	2.861	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012975-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.513	0.20	5.000	5.446	101	90	110				

Sample ID N012963-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0.02570	98.3	90	110				

Sample ID N012977-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.885	0.20	1.000	1.908	97.7	90	110				

Sample ID N012977-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.918	0.20	1.000	1.930	98.8	90	110				

Sample ID N012977-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6		Analysis Date: 7/21/2014	SeqNo: 1811370						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.687	0.20	5.000	7.592	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012977-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811372							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.226	0.20	5.000	3.214	100	90	110				

Sample ID N012977-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811378							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.205	0.20	5.000	7.134	101	90	110				

Sample ID N012992-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94246						
Client ID: ZZZZZZ	Batch ID: R94246	TestNo: EPA 218.6	Analysis Date: 7/21/2014	SeqNo: 1811382							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46116	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: PBW	Batch ID: 46116	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46116	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: LCSW	Batch ID: 46116	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814470						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.850 1.0 10.00 0 98.5 85 115

Sample ID N012992-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46116	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814474						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 20.041 1.0 10.00 10.71 93.3 75 125

Sample ID N012992-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46116	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 19.907 1.0 10.00 10.71 92.0 75 125 20.04 0.669 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-68D-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 11:27:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	18	0.10	1.0	mg/L	20		7/19/2014 10:32 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-003

Client Sample ID: MW-68S-059-Q3
Collection Date: 7/18/2014 10:25:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 40 0.26 2.5 mg/L 50 7/19/2014 10:44 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-004

Client Sample ID: MW-14B-059-Q3
Collection Date: 7/18/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate: Analyst: **PS**
Nitrate as N 5.3 0.026 0.25 mg/L 5 7/19/2014 02:44 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N012992-005

Client Sample ID: MW-71D-059-Q3
Collection Date: 7/18/2014 9:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 18 0.051 0.50 mg/L 10 7/19/2014 10:57 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** MW-71S-059-Q3
Lab Order: N012992 **Collection Date:** 7/18/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012992-006

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 53 0.26 2.5 mg/L 50 7/19/2014 12:38 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-31-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:51:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	10	0.051	0.50	mg/L	10		7/19/2014 12:51 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-32-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate		Analyst: PS
Nitrate as N	4.1	0.010	0.10	mg/L	2	7/19/2014 01:03 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-33-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:41:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	18	0.10	1.0	mg/L	20		7/19/2014 09:29 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-35-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 8:11:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	22	0.10	1.0	mg/L	20		7/19/2014 09:41 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: G-1R-059-Q3
Lab Order: N012992	Collection Date: 7/18/2014 9:26:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N012992-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	8.7	0.051	0.50	mg/L	10		7/19/2014 09:54 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** G-2R-059-Q3
Lab Order: N012992 **Collection Date:** 7/18/2014 8:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012992-014

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 38 0.26 2.5 mg/L 50 7/19/2014 01:16 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-953-059-Q3
Lab Order:	N012992	Collection Date:	7/18/2014 8:26:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N012992-015		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	37	0.26	2.5	mg/L	50		7/19/2014 04:00 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	G-5R-059-Q3
Lab Order:	N012992	Collection Date:	7/18/2014 10:01:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N012992-016		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217			PrepDate			Analyst: PS
Nitrate as N	7.4	0.051	0.50	mg/L	10		7/19/2014 10:06 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** GPVTS-059-Q3
Lab Order: N012992 **Collection Date:** 7/18/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N012992-018

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 16 0.10 1.0 mg/L 20 7/19/2014 02:32 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94217_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217
Client ID: PBW	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809640
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	ND	0.050			
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Sample ID LCS-R94217_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217
Client ID: LCSW	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809641
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	1.067	0.050	1.000	0	107 90 110
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Sample ID N012992-010C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217
Client ID: ZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809665
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	18.040	1.0			18.04 0 20
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Sample ID N012992-016C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217
Client ID: ZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809666
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	6.880	0.50			7.350 6.61 20
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Sample ID N012992-010C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217
Client ID: ZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809667
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	38.920	1.0	20.00	18.04	104 80 120
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012992-016C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.170	0.50	10.00	7.350	98.2	80	120				

Sample ID N012992-016C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809669						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.310	0.50	10.00	7.350	99.6	80	120	17.17	0.812	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.AU.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	2x1000 ml Poly		
	Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	HNO3					
	Filtered:	Field	Field	Field	Field	NA	NA					
	Holding Time (days):	28	180	180	2	7	180					
		Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	Gross Alpha/Beta (SM7110B/E900)					
SAMPLE ID	DATE	TIME	Matrix							Number of Containers	COMMENTS	
MW-781-059-Q3	7/18/2014	1315	Water	X						1	JM	
MW-68D-059-Q3	7/18/2014	1127	Water	X	X	X	X	X	X	6	JM	
MW-68S-059-Q3	7/18/2014	1025	Water	X	X	X	X	X	X	6	JM	
MW-14B-059-Q3	7/18/2014	0816	Water	X	X	X	X	X	X	6	LB	
MW-705-059-Q3	7/18/2014		Water	X						1		
MW-71D-059-Q3	7/18/2014	0957	Water	X	X	X	X	X	X	6	SD	
MW-71S-059-Q3	7/18/2014	1045	Water	X	X	X	X	X	X	6	SD	
MW-786-059-Q3	7/18/2014		Water	X						1		
EX-27-059-Q3	7/18/2014	1206	Water	X		X			X	3	TH	
EX-31-059-Q3	7/18/2014	0851	Water	X	X	X	X	X	X	6	TH	
EX-32-059-Q3	7/18/2014	1021	Water	X	X	X	X	X	X	6	TH	
EX-33-059-Q3	7/18/2014	0841	Water	X	X	X	X	X	X	6	TH	
EX-34-059-Q3	7/18/2014	0921	Water	X		X			X	3	TH	
EX-35-059-Q3	7/18/2014	0811	Water	X	X	X	X	X	X	6	TH	
G-1R-059-Q3	7/18/2014	0926	Water	X	X	X	X	X	X	6	MD	
G-2R-059-Q3	7/18/2014	0816	Water	X	X	X	X	X	X	6	MD	
MW-953-059-Q3	7/18/2014	0826	Water	X	X	X	X	X	X	6	MD	

NO12992-1

-2

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-15

Signatures Approved by <i>K. Blinn</i> Sampled by <i>Timothy Hoare</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Date/Time 7/18/14 1500 07/18/14/1500 07/18/14/1500 7/18/14 1500 7/18/14 1121 7/18/14	Shipping Details Method of Shipment: On Ice: <i>yes / no 5-10 / 3-3°C / 3.6°C</i> Airbill No: <i>1R#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/18/2014 Workorder: N012992
 Rep sample Temp (Deg C): 3.1/3.3/3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC *A. Cortes* 7/21/2014

Reviewed By:

ff 07/22/14



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TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Tinh Hoang

21-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N012992-002E / MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	32OZP	1		
N012992-003E / MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	32OZP	1		
N012992-004E / MW-14B-0559-Q3	Water	7/18/2014 8:16:00 AM	32OZP	1		
N012992-005E / MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	32OZP	1		
N012992-006E / MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	32OZP	1		
N012992-007C / EX-27-059-Q3	Water	7/18/2014 12:06:00 PM	32OZP	1		
N012992-008E / EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	32OZP	1		
N012992-009E / EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	32OZP	1		
N012992-010E / EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	32OZP	1		
N012992-011C / EX-34-059-Q3	Water	7/18/2014 9:21:00 AM	32OZP	1		
N012992-012E / EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	32OZP	1		
N012992-013E / G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	32OZP	1		
N012992-014E / G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	32OZP	1		
N012992-015E / MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	32OZP	1		
N012992-016E / G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	32OZP	1		
N012992-017E / GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	32OZP	1		
N012992-018E / GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012992 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 4776 9230
7706 4776 8966

Relinquished by: <u>ACortez</u> 7/21/2014	Date/Time	Received by: _____	Date/Time
Relinquished by: _____	1500	Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N012992-002D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0812-64.9754)*1000000}{60}$$

1763.33 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1800.00 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/22/2014								TDS/CONDUCTIVITY
Date Finished: 7/23/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46107	100	64.1085	64.1086	1	1	1.00		
LCS-46107	100	63.5075	63.6038	963	1	963.00		
N012992-002D	60	63.9754	64.0812	1058	1.6666667	1763.33	2400	0.73
N012992-002D-DUP	60	63.9938	64.1015	1077	1.6666667	1795.00	2400	0.75
N012992-003D	30	63.7754	63.889	1136	3.3333333	3786.67	4500	0.84
N012992-004D	100	64.2726	64.3367	641	1	641.00	959	0.67
N012992-005D	40	63.3788	63.4868	1080	2.5	2700.00	3400	0.79
N012992-006D	20	61.3599	61.4745	1146	5	5730.00	6180	0.93
N012992-008D	100	62.9931	63.1318	1387	1	1387.00	1880	0.74
N012992-009D	100	63.7995	63.9401	1406	1	1406.00	1924	0.73
N012992-010D	40	61.1334	61.2558	1224	2.5	3060.00	3840	0.80
N012992-012D	40	61.7272	61.8472	1200	2.5	3000.00	3700	0.81
N012992-013D	30	60.8343	60.9669	1326	3.3333333	4420.00	5120	0.86
N012992-014D	25	60.6342	60.764	1298	4	5192.00	5600	0.93
N012992-015D	25	60.7722	60.9031	1309	4	5236.00	5610	0.93
N012992-016D	100	64.2545	64.3599	1054	1	1054.00	1544	0.68
N012992-017D	45	61.6756	61.8018	1262	2.2222222	2804.44	3390	0.83
N012992-018D	55	60.5298	60.6373	1075	1.8181818	1954.55	2650	0.74

Jmer
7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/24/2014								TDS/CONDUCTIVITY
Date Finished: 7/25/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46168	100	64.1071	64.1071	0	1	0.00		
LCS-46168	100	63.5084	63.6031	947	1	947.00		
N012992-003D	35	60.8332	60.9571	1239	2.8571429	3540.00	4410	0.80
N012992-006D	25	60.6325	60.7693	1368	4	5472.00	5980	0.92
N012992-012D	40	60.7691	60.8891	1200	2.5	3000.00	3620	0.83
N012992-013D	30	64.2561	64.3817	1256	3.3333333	4186.67	4960	0.84
N012992-014D	25	61.1334	61.2539	1205	4	4820.00	5500	0.88
N012992-015D	25	61.7289	61.8499	1210	4	4840.00	5470	0.88
N012992-017D	45	60.5317	60.6607	1290	2.2222222	2866.67	3340	0.86
N013015-001D	100	63.9721	64.0835	1114	1	1114.00	1559	0.71
N013015-001D-DUP	100	63.9932	64.1033	1101	1	1101.00	1559	0.71
N013015-002D	100	64.2731	64.3856	1125	1	1125.00	1611	0.70
N013015-003D	100	63.7984	63.9046	1062	1	1062.00	1545	0.69
N013015-004D	30	62.9943	63.1289	1346	3.3333333	4486.67	4940	0.91
N013015-005D	30	61.3612	61.4968	1356	3.3333333	4520.00	4970	0.91
N013015-006D	40	63.7785	63.9169	1384	2.5	3460.00	3750	0.92

JML
7/29/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N012992-002B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 74.406538871 * 1 * (25/25) * 0.67 \\ &= 49.85238104357 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 50$$

 8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012992
Test Method: EPA 200.8
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46119

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012992-003B-DT 5X	Uranium	pCi/L	58.73306857	PASS	54.90725472	6.97%	10

Note: NA - Not applicable


CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N012992-003B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94342						
Client ID: ZZZZZ	Batch ID: 46119	TestNo: EPA 200.8	Analysis Date: 7/29/2014	SeqNo: 1815038							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	71.931	1.3	13.40	54.91	127	80	120				S

DT @ 5x is within criteria

 8/4/2014

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012992-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.017425 * 1 \\ &= 0.017425\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Handwritten signature 8/1/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012992-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 11.6896 * 1 \\ &= 11.6896 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 12$$

 8/1/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N012992-017C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.704 * 10 \\ &= 17.04 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 17$$

 8/4/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012992-016B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.2558420675 * 1 * (25/25) \\ &= 3.2558420675 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.3$$

 8/1/2014

CLIENT: CH2M HILL
Work Order: N012992
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012992-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94330						
Client ID: ZZZZZZ	Batch ID: 46116	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1814473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	31.522	2.0	20.00	10.71	104	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 19, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N012992
Pace Project No.: 30125871

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This report has been reissued on August 19, 2014. The sample ID for sample 003 was corrected to match the COC.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carin Ferris for
Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N012992

Pace Project No.: 30125871

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30125871001	N012992-002E/MW-68D-059-Q3	Water	07/18/14 11:27	07/25/14 08:40
30125871002	N012992-003E/MW-68S-059-Q3	Water	07/18/14 10:25	07/25/14 08:40
30125871003	N012992-004E/MW-14B-059-Q3	Water	07/18/14 08:16	07/25/14 08:40
30125871004	N012992-005E/MW-71D-059-Q3	Water	07/18/14 09:57	07/25/14 08:40
30125871005	N012992-006E/MW-71S-059-Q3	Water	07/18/14 10:45	07/25/14 08:40
30125871006	N012992-007C/EX-27-059-Q3	Water	07/18/14 12:06	07/25/14 08:40
30125871007	N012992-008E/EX-31-059-Q3	Water	07/18/14 08:51	07/25/14 08:40
30125871008	N012992-009E/EX-32-059-Q3	Water	07/18/14 10:21	07/25/14 08:40
30125871009	N012992-010E/EX-33-059-Q3	Water	07/18/14 08:41	07/25/14 08:40
30125871010	N012992-011C/EX-34-059-Q3	Water	07/18/14 09:21	07/25/14 08:40
30125871011	N012992-012E/EX-35-059-Q3	Water	07/18/14 08:11	07/25/14 08:40
30125871012	N012992-013E/G-1R-059-Q3	Water	07/18/14 09:26	07/25/14 08:40
30125871013	N012992-014E/G-2R-059-Q3	Water	07/18/14 08:16	07/25/14 08:40
30125871014	N012992-015E/MW-953-059-Q3	Water	07/18/14 08:26	07/25/14 08:40
30125871015	N012992-016E/G-5R-059-Q3	Water	07/18/14 10:01	07/25/14 08:40
30125871016	N012992-017E/GPVTN-059-Q3	Water	07/18/14 09:01	07/25/14 08:40
30125871017	N012992-018E/GPVTS-059-Q3	Water	07/18/14 11:01	07/25/14 08:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N012992
Pace Project No.: 30125871

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30125871001	N012992-002E/MW-68D-059-Q3	EPA 900.0	FCC	2
30125871002	N012992-003E/MW-68S-059-Q3	EPA 900.0	FCC	2
30125871003	N012992-004E/MW-14B-059-Q3	EPA 900.0	FCC	2
30125871004	N012992-005E/MW-71D-059-Q3	EPA 900.0	FCC	2
30125871005	N012992-006E/MW-71S-059-Q3	EPA 900.0	FCC	2
30125871006	N012992-007C/EX-27-059-Q3	EPA 900.0	FCC	2
30125871007	N012992-008E/EX-31-059-Q3	EPA 900.0	FCC	2
30125871008	N012992-009E/EX-32-059-Q3	EPA 900.0	FCC	2
30125871009	N012992-010E/EX-33-059-Q3	EPA 900.0	FCC	2
30125871010	N012992-011C/EX-34-059-Q3	EPA 900.0	FCC	2
30125871011	N012992-012E/EX-35-059-Q3	EPA 900.0	FCC	2
30125871012	N012992-013E/G-1R-059-Q3	EPA 900.0	FCC	2
30125871013	N012992-014E/G-2R-059-Q3	EPA 900.0	FCC	2
30125871014	N012992-015E/MW-953-059-Q3	EPA 900.0	FCC	2
30125871015	N012992-016E/G-5R-059-Q3	EPA 900.0	FCC	2
30125871016	N012992-017E/GPVTN-059-Q3	EPA 900.0	FCC	2
30125871017	N012992-018E/GPVTS-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N012992

Pace Project No.: 30125871

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 19, 2014

General Information:

17 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

The % recovery for the gross beta matrix spike performed on sample 30125871003 was low and outside of Pace's default acceptance criteria at 74.60%. The low bias may be due to sample matrix interference and indicate a low bias in the sample result.

- N012992-004E/MW-14B-059-Q3 (Lab ID: 30125871003)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: N012992

Pace Project No.: 30125871

QC Batch: RADC/20698

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30125871001, 30125871002, 30125871003, 30125871004, 30125871005, 30125871006, 30125871007, 30125871008, 30125871009, 30125871010, 30125871011, 30125871012, 30125871013, 30125871014, 30125871015, 30125871016, 30125871017

METHOD BLANK: 765899

Matrix: Water

Associated Lab Samples: 30125871001, 30125871002, 30125871003, 30125871004, 30125871005, 30125871006, 30125871007, 30125871008, 30125871009, 30125871010, 30125871011, 30125871012, 30125871013, 30125871014, 30125871015, 30125871016, 30125871017

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.056 ± 0.642 (1.78) C:NA T:NA	pCi/L	07/31/14 06:40	
Gross Beta	-0.052 ± 0.669 (1.69) C:NA T:NA	pCi/L	07/31/14 06:40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691



QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct#:

Field Sampler: Think Hoang

21-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N012992-002E / MW-68D-059-Q3	Water	7/18/2014 11:27:00 AM	320ZP	1		001
N012992-003E / MW-68S-059-Q3	Water	7/18/2014 10:25:00 AM	320ZP	1		002
N012992-004E / MW-14B-0559-Q3	Water	7/18/2014 8:16:00 AM	320ZP	1		003
N012992-005E / MW-71D-059-Q3	Water	7/18/2014 9:57:00 AM	320ZP	1		004
N012992-006E / MW-71S-059-Q3	Water	7/18/2014 10:45:00 AM	320ZP	1		005
N012992-007C / EX-27-059-Q3	Water	7/18/2014 12:06:00 PM	320ZP	1		006
N012992-008E / EX-31-059-Q3	Water	7/18/2014 8:51:00 AM	320ZP	1		007
N012992-009E / EX-32-059-Q3	Water	7/18/2014 10:21:00 AM	320ZP	1		008
N012992-010E / EX-33-059-Q3	Water	7/18/2014 8:41:00 AM	320ZP	1		009
N012992-011C / EX-34-059-Q3	Water	7/18/2014 9:21:00 AM	320ZP	1		010
N012992-012E / EX-35-059-Q3	Water	7/18/2014 8:11:00 AM	320ZP	1		011
N012992-013E / G-1R-059-Q3	Water	7/18/2014 9:26:00 AM	320ZP	1		012
N012992-014E / G-2R-059-Q3	Water	7/18/2014 8:16:00 AM	320ZP	1		013
N012992-015E / MW-953-059-Q3	Water	7/18/2014 8:26:00 AM	320ZP	1		014
N012992-016E / G-5R-059-Q3	Water	7/18/2014 10:01:00 AM	320ZP	1		015
N012992-017E / GPVTN-059-Q3	Water	7/18/2014 9:01:00 AM	320ZP	1		016
N012992-018E / GPVTS-059-Q3	Water	7/18/2014 11:01:00 AM	320ZP	1		017

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:~~N012992~~ For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT. **N129924**

Please analyze for Gross Alpha/Beta by Method 900. CH2MHIH samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 4776 9230
 7706 4776 8966

Relinquished by: <i>Alorton</i>	Date/Time: 7/21/2014
Relinquished by: _____	Date/Time: _____
Received by: <i>Scott Berber</i>	Date/Time: 7-25-14 0848
Received by: _____	Date/Time: _____

30125871



Sample Condition Upon Receipt

Client Name: ATL

Project #

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 77241778966 77041081646

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other foam

Thermometer Used NA Type of Ice: Wet Blue None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: SPA 7-25-14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of inspection items and checkboxes. Items include Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume, Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Samples checked for dechlorination, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot # (if purchased).

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Carlos Serrano

Date: 7/28/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: **30125871**

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem NaIgene (125 / 250 / 500 / 1L)	Radchem NaIgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other		
00100	ATL																									
017	ATL																									

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 8/5/2014
Worklist: 20698
Matrix: Water

Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 765899



Sample Matrix Spike Control Assessment		Analyte	Sample Collection Date	Gross Alpha	Gross Beta
Sample MS D.L.	30125871003MS	7/18/2014	30125871003	30125871003MS	
Sample MSD I.D.	13-047GB				
MS/MSD Decay Corrected Spike Conc. (pCi/L)	64.598				
Spike Volume Used in MS (mL)	0.10				
Spike Volume Used in MSD (mL)	0.10				
MS Aliquot (L, g, F)	0.1616				
MS Target Conc. (pCi/L, g, F)	39.964				
MSD Aliquot (L, g, F)					
MSD Target Conc. (pCi/L, g, F)	1.410				
MS Spike uncertainty (calculated)	3.182				
MSD Spike uncertainty (calculated)	28.153				
Sample Result	6.347				
Sample 1.96 Sigma Unc.	43.202				
Sample Matrix Spike Result	8.584				
Sample MS 1.96 Sigma Unc.	13.039				
Sample Matrix Spike Duplicate Result					
Sample MSD 1.96 Sigma Unc.	59.41%				
MS % Recovery	Fail***				
MSD % Recovery	Fail***				
MS Assessment	Fail***				
MSD Assessment	Fail***				
MS/MSD Upper % Recovery Limits	121.00%				
MS/MSD Lower % Recovery Limits	69.00%				
Matrix Spike/Matrix Spike Duplicate Sample Assessment	79.00%				

Method Blank Assessment		Activity	1.96 Sig. Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	-0.0560	0.6420	1.7800	0.55500			
Gross Beta	-0.0520	0.6690	1.6930	0.57100			

Laboratory Control Sample Assessment		LCS	LCS D	LCS D	LCS D	LCS	LCS D	LCS D
Analyte	Gross Alpha	7/31/14 6:40	7/31/14 6:40	7/31/14 6:40	7/31/14 6:40			
Count Date	13-048GA	64.598	84.571	84.571	84.571			
Spike I.D.	0.050	0.050	0.050	0.050	0.050			
Spike Concentration (pCi/L)	0.201	0.201	0.201	0.201	0.201			
Volume Used (mL)	16.104	16.094	21.083	21.070	21.070			
Aliquot Volume (L, g, F)	0.568	0.568	1.281	1.280	1.280			
Target Conc. (pCi/L, g, F)	12.284	13.297	21.823	21.525	21.525			
Result (pCi/L, g, F)	3.139	4.578	103.51%	102.16%	102.16%			
1.96 Sigma Unc.	76.28%	82.62%	Pass	Pass	Pass			
% Recovery	121.00%	130.00%	130.00%	130.00%	130.00%			
Assessment	69.00%	79.00%	79.00%	79.00%	79.00%			
Upper % Recovery Limits								
Lower % Recovery Limits								

Duplicate Sample Assessment		LCS	LCS D	LCS D	LCS	LCS D
LCS/LCSD Y or N?	Y					
Analyte	Gross Alpha					
Sample I.D.	LCS20698					
Duplicate Sample I.D.	LCS20698					
Sample Result (pCi/L, g, F)	12.2840					
1.96 Sigma Unc.	3.1390					
Sample Duplicate Result (pCi/L, g, F)	13.2970					
Duplicate Sample 1.96 Sigma Unc.	3.3590					
Either results below MDC?	NO					
Relative Percent Difference	7.92%					
Assessment	Pass					
% RPD Limit	34.00%					

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

no limit to 55-135%
8/12/14

8/12/14

August 04, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N012993

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 18, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012993

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

EOSINE and FLUORESCEIN were subcontracted to Ozark Underground Labs- Protem, Missouri.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 05-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012993
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012993-001A	MW-758-059b-Q3	Water	7/18/2014 12:54:00 PM	7/18/2014	8/4/2014
N012993-002A	MW-03A-059b-Q3	Water	7/18/2014 12:03:00 PM	7/18/2014	8/4/2014
N012993-002B	MW-03A-059b-Q3	Water	7/18/2014 12:03:00 PM	7/18/2014	8/4/2014
N012993-003A	MW-180RD-059b-Q3	Water	7/18/2014 11:00:00 AM	7/18/2014	8/4/2014
N012993-003B	MW-180RD-059b-Q3	Water	7/18/2014 11:00:00 AM	7/18/2014	8/4/2014
N012993-003C	MW-180RD-059b-Q3	Water	7/18/2014 11:00:00 AM	7/18/2014	8/4/2014
N012993-004A	MW-926-059b-Q3	Water	7/18/2014 11:10:00 AM	7/18/2014	8/4/2014
N012993-004B	MW-926-059b-Q3	Water	7/18/2014 11:10:00 AM	7/18/2014	8/4/2014
N012993-004C	MW-926-059b-Q3	Water	7/18/2014 11:10:00 AM	7/18/2014	8/4/2014
N012993-005A	MW-180RS-059b-Q3	Water	7/18/2014 10:23:00 AM	7/18/2014	8/4/2014
N012993-005B	MW-180RS-059b-Q3	Water	7/18/2014 10:23:00 AM	7/18/2014	8/4/2014
N012993-005C	MW-180RS-059b-Q3	Water	7/18/2014 10:23:00 AM	7/18/2014	8/4/2014
N012993-006A	SC-MW-26D-059b-Q3	Water	7/18/2014 9:29:00 AM	7/18/2014	8/4/2014
N012993-006B	SC-MW-26D-059b-Q3	Water	7/18/2014 9:29:00 AM	7/18/2014	8/4/2014
N012993-007A	SC-MW-26S-059b-Q3	Water	7/18/2014 8:47:00 AM	7/18/2014	8/4/2014
N012993-007B	SC-MW-26S-059b-Q3	Water	7/18/2014 8:47:00 AM	7/18/2014	8/4/2014
N012993-008A	MW-759-059b-Q3	Water	7/18/2014 11:30:00 AM	7/18/2014	8/4/2014
N012993-009A	MW-06-059b-Q3	Water	7/18/2014 8:55:00 AM	7/18/2014	8/4/2014
N012993-009B	MW-06-059b-Q3	Water	7/18/2014 8:55:00 AM	7/18/2014	8/4/2014
N012993-009C	MW-06-059b-Q3	Water	7/18/2014 8:55:00 AM	7/18/2014	8/4/2014
N012993-009D	MW-06-059b-Q3	Water	7/18/2014 8:55:00 AM	7/18/2014	8/4/2014
N012993-010A	CA-MW-108D-059b-Q3	Water	7/18/2014 8:50:00 AM	7/18/2014	8/4/2014
N012993-010B	CA-MW-108D-059b-Q3	Water	7/18/2014 8:50:00 AM	7/18/2014	8/4/2014
N012993-010C	CA-MW-108D-059b-Q3	Water	7/18/2014 8:50:00 AM	7/18/2014	8/4/2014
N012993-010D	CA-MW-108D-059b-Q3	Water	7/18/2014 8:50:00 AM	7/18/2014	8/4/2014
N012993-011A	MW-922-059b-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012993-011B	MW-922-059b-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012993-011C	MW-922-059b-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014
N012993-011D	MW-922-059b-Q3	Water	7/18/2014 8:51:00 AM	7/18/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N012993
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N012993-012A	CA-MW-108S-059b-Q3	Water	7/18/2014 9:59:00 AM	7/18/2014	8/4/2014
N012993-012B	CA-MW-108S-059b-Q3	Water	7/18/2014 9:59:00 AM	7/18/2014	8/4/2014
N012993-012C	CA-MW-108S-059b-Q3	Water	7/18/2014 9:59:00 AM	7/18/2014	8/4/2014
N012993-012D	CA-MW-108S-059b-Q3	Water	7/18/2014 9:59:00 AM	7/18/2014	8/4/2014
N012993-013A	CA-MW-109D-059b-Q3	Water	7/18/2014 12:21:00 PM	7/18/2014	8/4/2014
N012993-013B	CA-MW-109D-059b-Q3	Water	7/18/2014 12:21:00 PM	7/18/2014	8/4/2014
N012993-013C	CA-MW-109D-059b-Q3	Water	7/18/2014 12:21:00 PM	7/18/2014	8/4/2014
N012993-013D	CA-MW-109D-059b-Q3	Water	7/18/2014 12:21:00 PM	7/18/2014	8/4/2014
N012993-014A	CA-MW-109S-059b-Q3	Water	7/18/2014 11:17:00 AM	7/18/2014	8/4/2014
N012993-014B	CA-MW-109S-059b-Q3	Water	7/18/2014 11:17:00 AM	7/18/2014	8/4/2014
N012993-014C	CA-MW-109S-059b-Q3	Water	7/18/2014 11:17:00 AM	7/18/2014	8/4/2014
N012993-014D	CA-MW-109S-059b-Q3	Water	7/18/2014 11:17:00 AM	7/18/2014	8/4/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-001

Client Sample ID: MW-758-059b-Q3
Collection Date: 7/18/2014 12:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 01:40 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/22/2014 12:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-002

Client Sample ID: MW-03A-059b-Q3
Collection Date: 7/18/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	0.53	0.016	0.20		µg/L	1	7/22/2014 12:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-180RD-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 11:00:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	95	0.32	4.0		µg/L	20	7/22/2014 03:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-004

Client Sample ID: MW-926-059b-Q3
Collection Date: 7/18/2014 11:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	95	0.16	2.0		µg/L	10	7/22/2014 01:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-005

Client Sample ID: MW-180RS-059b-Q3
Collection Date: 7/18/2014 10:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	92	0.16	2.0		µg/L	10	7/22/2014 01:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-006

Client Sample ID: SC-MW-26D-059b-Q3
Collection Date: 7/18/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate:		Analyst: QBM
Hexavalent Chromium	1000	1.6	20	µg/L	100	7/22/2014 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-26S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:47:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/22/2014 02:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-008

Client Sample ID: MW-759-059b-Q3
Collection Date: 7/18/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140722A	QC Batch: R94251				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/22/2014 02:01 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/22/2014 02:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-009

Client Sample ID: MW-06-059b-Q3
Collection Date: 7/18/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	5.3	0.016	0.20		µg/L	1	7/22/2014 02:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117				PrepDate	7/21/2014	Analyst: CEI
Chromium	5.1	0.030	1.0		µg/L	1	7/29/2014 07:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:50:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266	PrepDate	Analyst: QBM
Hexavalent Chromium	15 0.016 0.20	µg/L	1 7/22/2014 03:35 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-011

Client Sample ID: MW-922-059b-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	15	0.016	0.20		µg/L	1	7/22/2014 03:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-012

Client Sample ID: CA-MW-108S-059b-Q3
Collection Date: 7/18/2014 9:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	76	0.16	2.0		µg/L	10	7/22/2014 03:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 12:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	96	0.16	2.0		µg/L	10	7/22/2014 04:04 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 11:17:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266			PrepDate			Analyst: QBM
Hexavalent Chromium	0.44	0.016	0.20	µg/L	1		7/22/2014 04:13 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94251	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: PBW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812086
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94251	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: LCSW	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812087
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.212	0.060	0.2000	0	106 90 110
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Sample ID N012968-009ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812089
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.381	0.060			0.3788 0.679 20
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Sample ID N012977-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812092
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.206	0.060	0.2000	0	103 90 110
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Sample ID N012992-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251
Client ID: ZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812094
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.235	0.060	0.2000	0.01742	109 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012992-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812095						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.237	0.060	0.2000	0.01742	110	90	110	0.2348	0.792	20	

Sample ID N012992-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812099						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0	110	90	110				S

Sample ID N012993-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812101						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012993-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812103						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012990-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812105						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01758	97.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94251						
Client ID: ZZZZZZ	Batch ID: R94251	TestNo: EPA 218.6	Analysis Date: 7/22/2014	SeqNo: 1812107							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.227	0.060	0.2000	0.01841	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94266	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: PBW	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94266	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: LCSW	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812253						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.035	0.20	5.000	0	101	90	110				
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Sample ID N013007-001ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812255						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.753	0.20						2.732	0.740	20	
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Sample ID N013007-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812256						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.664	0.20	1.000	2.732	93.2	90	110				
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Sample ID N013007-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812257						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.715	0.20	1.000	2.732	98.2	90	110	3.664	1.37	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012993-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812259						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID N012993-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.539	0.20	1.000	0.5306	101	90	110				

Sample ID N012993-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0.03490	99.8	90	110				

Sample ID N012993-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N012993-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.303	0.20	5.000	5.252	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012993-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.457	0.20	1.000	0.4355	102	90	110
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Sample ID N013005-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.009	0.20	1.000	0	101	90	110
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Sample ID N013005-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812287						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.301	0.20	1.000	2.300	100	90	110
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Sample ID N013005-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.559	0.20	1.000	2.573	98.5	90	110
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Sample ID N013005-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.353	0.20	1.000	1.325	103	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.230	0.20	1.000	2.238	99.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46117	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348						
Client ID: PBW	Batch ID: 46117	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815504						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46117	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348						
Client ID: LCSW	Batch ID: 46117	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815505						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.387 1.0 10.00 0 104 85 115

Sample ID N012993-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46117	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815509						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.721 1.0 10.00 0.8026 99.2 75 125

Sample ID N012993-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46117	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815510						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.632 1.0 10.00 0.8026 98.3 75 125 10.72 0.829 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-009

Client Sample ID: MW-06-059b-Q3
Collection Date: 7/18/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Sulfate	180	0.66	10		mg/L	20	7/19/2014 07:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217				PrepDate		Analyst: PS
Nitrate as N	0.37	0.0051	0.050		mg/L	1	7/19/2014 12:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-010

Client Sample ID: CA-MW-108D-059b-Q3
Collection Date: 7/18/2014 8:50:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Sulfate	74	0.33	5.0		mg/L	10	7/19/2014 07:48 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217				PrepDate		Analyst: PS
Nitrate as N	2.0	0.0051	0.050		mg/L	1	7/19/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-011

Client Sample ID: MW-922-059b-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719B** QC Batch: **R94218** PrepDate Analyst: **PS**
Sulfate 76 0.33 5.0 mg/L 10 7/19/2014 08:00 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140719A** QC Batch: **R94217** PrepDate Analyst: **PS**
Nitrate as N 2.2 0.051 0.50 mg/L 10 7/19/2014 12:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-012

Client Sample ID: CA-MW-108S-059b-Q3
Collection Date: 7/18/2014 9:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Sulfate	250	1.6	25		mg/L	50	7/19/2014 08:13 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719A	QC Batch: R94217				PrepDate		Analyst: PS
Nitrate as N	16	0.051	0.50		mg/L	10	7/19/2014 11:47 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-013

Client Sample ID: CA-MW-109D-059b-Q3
Collection Date: 7/18/2014 12:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/19/2014 05:03 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Sulfate	150	0.33	5.0		mg/L	10	7/19/2014 08:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Nitrate as N	4.2	0.026	0.25		mg/L	5	7/19/2014 05:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-014

Client Sample ID: CA-MW-109S-059b-Q3
Collection Date: 7/18/2014 11:17:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/19/2014 05:16 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Sulfate	64	0.33	5.0		mg/L	10	7/19/2014 05:41 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140719B	QC Batch: R94218				PrepDate		Analyst: PS
Nitrate as N	5.2	0.051	0.50		mg/L	10	7/19/2014 05:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94218_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94218						
Client ID: PBW	Batch ID: R94218	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809694						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94218_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94218						
Client ID: LCSW	Batch ID: R94218	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.486 0.10 2.500 0 99.4 90 110

Sample ID N012993-013C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94218						
Client ID: ZZZZZ	Batch ID: R94218	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809698						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N012993-013C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94218						
Client ID: ZZZZZ	Batch ID: R94218	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.733 0.10 2.500 0 109 80 120

Sample ID N012993-013C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94218						
Client ID: ZZZZZ	Batch ID: R94218	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809700						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 3.044 0.10 2.500 0 122 80 120 2.733 10.8 20 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R94218_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94218			
Client ID:	PBW	Batch ID:	R94218	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809711			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	ND	0.50												
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Sample ID	LCS-R94218_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94218			
Client ID:	LCSW	Batch ID:	R94218	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809712			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	4.970	0.50	5.000	0	99.4	90	110							
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Sample ID	N012993-011C-DUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94218			
Client ID:	ZZZZZ	Batch ID:	R94218	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809721			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	76.510	5.0								76.11	0.524	20		
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Sample ID	N012993-011C-MS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94218			
Client ID:	ZZZZZ	Batch ID:	R94218	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809722			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	125.500	5.0	50.00	76.11	98.8	80	120							
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Sample ID	N012993-011C-MSD	SampType:	MSD	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94218			
Client ID:	ZZZZZ	Batch ID:	R94218	TestNo:	EPA 300.0			Analysis Date:	7/19/2014	SeqNo:	1809725			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	124.530	5.0	50.00	76.11	96.8	80	120	125.5	0.776	20				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N012992-016C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.170	0.50	10.00	7.350	98.2	80	120				

Sample ID N012992-016C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94217						
Client ID: ZZZZZZ	Batch ID: R94217	TestNo: EPA 300.0		Analysis Date: 7/19/2014	SeqNo: 1809669						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.310	0.50	10.00	7.350	99.6	80	120	17.17	0.812	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-009

Client Sample ID: MW-06-059b-Q3
Collection Date: 7/18/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/19/2014 10:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:50:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/19/2014 11:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-011

Client Sample ID: MW-922-059b-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/20/2014 12:02 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 9:59:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/20/2014 12:25 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 12:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/20/2014 12:48 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 11:17:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140719A	QC Batch: R94219			PrepDate			Analyst: PS
Organic Carbon, Total	9.7	0.041	1.0	mg/L	1		7/20/2014 01:11 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94219	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: PBW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810025
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0			
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Sample ID LCS-R94219	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: LCSW	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810026
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.696	1.0	10.00	0	107 85 115
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Sample ID N012965-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810027
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.539	1.0	10.00	0.1124	104 75 125
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Sample ID N012965-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94219
Client ID: ZZZZZ	Batch ID: R94219	TestNo: SM 5310C		Analysis Date: 7/19/2014	SeqNo: 1810028
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.365	1.0	10.00	0.1124	103 75 125 10.54 1.67 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-002

Client Sample ID: MW-03A-059b-Q3
Collection Date: 7/18/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120			PrepDate	7/21/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 08:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-006

Client Sample ID: SC-MW-26D-059b-Q3
Collection Date: 7/18/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L
			1
			7/21/2014 07:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-26S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:47:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	0.30 0.0013	0.020	mg/L 1 7/21/2014 08:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-009

Client Sample ID: MW-06-059b-Q3
Collection Date: 7/18/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120			PrepDate	7/21/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 08:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:50:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 08:35 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-011

Client Sample ID: MW-922-059b-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120			PrepDate	7/21/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/21/2014 08:39 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 9:59:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/21/2014 08:44 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 12:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	0.021 0.0013	0.020 mg/L	1 7/21/2014 08:49 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109S-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 11:17:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-014	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140721B	QC Batch: 46120	PrepDate: 7/21/2014	Analyst: CEI
Iron	0.29 0.0013	0.020	mg/L 1 7/21/2014 08:55 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46120	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94232
Client ID: PBW	Batch ID: 46120	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810821
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	ND	0.020			

Sample ID LCS-46120	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94232
Client ID: LCSW	Batch ID: 46120	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810822
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.092	0.020	0.1000	0	91.7 85 115

Sample ID N012993-006B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94232
Client ID: ZZZZZZ	Batch ID: 46120	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810826
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.100	0.020	0.1000	0	99.8 75 125

Sample ID N012993-006B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/21/2014	RunNo: 94232
Client ID: ZZZZZZ	Batch ID: 46120	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/21/2014	SeqNo: 1810827
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.089	0.020	0.1000	0	89.2 75 125 0.09977 11.2 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-002

Client Sample ID: MW-03A-059b-Q3
Collection Date: 7/18/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10	µg/L	1	7/29/2014 06:50 PM
Manganese	ND	0.026	0.50	µg/L	1	7/29/2014 06:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-003

Client Sample ID: MW-180RD-059b-Q3
Collection Date: 7/18/2014 11:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117				PrepDate: 7/21/2014		Analyst: CEI
Manganese	11	0.026	0.50		µg/L	1	7/29/2014 07:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-004

Client Sample ID: MW-926-059b-Q3
Collection Date: 7/18/2014 11:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117				PrepDate: 7/21/2014		Analyst: CEI
Manganese	9.6	0.026	0.50		µg/L	1	7/29/2014 07:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-005

Client Sample ID: MW-180RS-059b-Q3
Collection Date: 7/18/2014 10:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI	
Manganese	ND	0.026	0.50	µg/L	1	7/29/2014 07:40 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-006

Client Sample ID: SC-MW-26D-059b-Q3
Collection Date: 7/18/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate: 7/21/2014		Analyst: CEI	
Arsenic	0.69	0.027	0.10	µg/L	1	7/29/2014 07:45 PM	
Manganese	ND	0.026	0.50	µg/L	1	7/29/2014 07:45 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-007

Client Sample ID: SC-MW-26S-059b-Q3
Collection Date: 7/18/2014 8:47:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI
Arsenic	2.3	0.027	0.10	µg/L	1	7/29/2014 07:51 PM
Manganese	520	0.13	2.5	µg/L	5	7/31/2014 12:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-009

Client Sample ID: MW-06-059b-Q3
Collection Date: 7/18/2014 8:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117				PrepDate: 7/21/2014		Analyst: CEI
Arsenic	0.45	0.027	0.10		µg/L	1	7/29/2014 07:56 PM
Manganese	ND	0.026	0.50		µg/L	1	8/1/2014 10:06 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-108D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 8:50:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI	
Arsenic	1.7	0.027	0.10		µg/L	1	7/29/2014 08:02 PM
Manganese	26	0.026	0.50		µg/L	1	7/29/2014 08:02 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-011

Client Sample ID: MW-922-059b-Q3
Collection Date: 7/18/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117				PrepDate: 7/21/2014		Analyst: CEI
Arsenic	2.1	0.027	0.10		µg/L	1	7/29/2014 08:08 PM
Manganese	34	0.026	0.50		µg/L	1	7/29/2014 08:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-012

Client Sample ID: CA-MW-108S-059b-Q3
Collection Date: 7/18/2014 9:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI
Arsenic	0.55	0.027	0.10	µg/L	1	7/29/2014 08:13 PM
Manganese	ND	0.026	0.50	µg/L	1	7/29/2014 08:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-109D-059b-Q3
Lab Order: N012993	Collection Date: 7/18/2014 12:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N012993-013	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014		Analyst: CEI
Arsenic	1.1	0.027	0.10		µg/L	1	7/29/2014 08:19 PM
Manganese	ND	0.026	0.50		µg/L	1	7/29/2014 08:19 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N012993-014

Client Sample ID: CA-MW-109S-059b-Q3
Collection Date: 7/18/2014 11:17:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46117			PrepDate	7/21/2014	Analyst: CEI	
Arsenic	9.0	0.027	0.10		µg/L	1	7/29/2014 08:24 PM
Manganese	1200	0.26	5.0		µg/L	10	7/31/2014 12:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46117	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348
Client ID: PBW	Batch ID: 46117	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1815587
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	0.059	0.50			

Sample ID LCS-46117	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348
Client ID: LCSW	Batch ID: 46117	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1815588
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.526	0.10	10.00	0	105 85 115
Manganese	101.461	0.50	100.0	0	101 85 115

Sample ID N012993-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348
Client ID: ZZZZZ	Batch ID: 46117	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1815592
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.940	0.10	10.00	2.483	105 75 125
Manganese	95.406	0.50	100.0	0	95.4 75 125

Sample ID N012993-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/21/2014	RunNo: 94348
Client ID: ZZZZZ	Batch ID: 46117	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1815593
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.854	0.10	10.00	2.483	104 75 125 12.94 0.661 20
Manganese	94.620	0.50	100.0	0	94.6 75 125 95.41 0.828 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059B-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	50ml Centrifug	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	Preservatives: (NH4)2SO4, NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	4°C (blue ice)			
				Filtered:	Field	Field	Field	Field	Field	Field	NA	Field			
				Holding Time (days):	28	180	180	180	180	2	2	28	7		
					Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Metals Dissolved (6020AFF) FF Mn	Anions (E300.0) FF NO3N, SO4	Ortho-Phosphate (E300.0) FF	TOC (E5310)	Eosine, Fluorescein FF		
MW-758-059b-Q3	7/18/2014	1254	Water	X									1	JD	
MW-03A-059b-Q3	7/18/2014	1203	Water	X	X		X						2	JD	
MW-180RD-059b-Q3	7/18/2014	1100	Water	X				X				X	3	JD	
MW-926-059b-Q3	7/18/2014	1110	Water	X				X				X	3	JD	
MW-180RS-059b-Q3	7/18/2014	1023	Water	X				X				X	3	JD	
SC-MW-26D-059b-Q3	7/18/2014	0929	Water	X	X		X						2	JD	
SC-MW-26S-059b-Q3	7/18/2014	0847	Water	X	X		X						2	JD	
MW-759-059b-Q3	7/18/2014	1130	Water	X									1	PM	
MW-06-059b-Q3	7/18/2014	0855	Water	X	X	X			X		X		6	LB	
CA-MW-108D-059b-Q3	7/18/2014	0850	Water	X	X		X		X		X		6	PM	
MW-922-059b-Q3	7/18/2014	0851	Water	X	X		X		X		X		6	PM	
CA-MW-108S-059b-Q3	7/18/2014	0959	Water	X	X		X		X		X		6	PM	
CA-MW-109D-059b-Q3	7/18/2014	1221	Water	X	X		X		X	X	X		6	PM	
CA-MW-109S-059b-Q3	7/18/2014	1117	Water	X	X		X		X	X	X		6	PM	
MW-760-059b-Q3	7/18/2014		Water	X									1		
TOTAL NUMBER OF CONTAINERS												53			

NO12993-1

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Approved by <u>[Signature]</u> Sampled by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u> Relinquished by <u>[Signature]</u> Received by <u>[Signature]</u>	Signatures Date/Time 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/18/14 1500 7/18/14 1500	Shipping Details Method of Shipment: On Ice: <u>yes</u> / no <u>2.4°C / 3.5°C</u> Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/18/2014 Workorder: N012993
 Rep sample Temp (Deg C): 2.9/3.4/3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC AlCortez 7/21/2014

Reviewed By:

ff 07/22/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Ozark Underground Labs.
1572 Alley Lane
Protem, Missouri 65733

TEL: (417) 785-4289
FAX: (417) 785-4290
Acct #:

Field Sampler: Signed

21-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EOSINE	FLUORESCEIN
N012993-003C / MW-180RD-059b-Q3		7/18/2014 11:00:00 AM	2OZP	1	1
N012993-004C / MW-926-059b-Q3		7/18/2014 11:10:00 AM	2OZP	1	1
N012993-005C / MW-180RS-059b-Q3		7/18/2014 10:23:00 AM	2OZP	1	1

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N012993 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports@assetlaboratories.com by:Normal TAT.

Please analyze for Eosine and Fluorescein. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7706 4800 4149

Relinquished by: <u>ACortez</u> 7/21/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012993-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.008634 * 1 \\ &= 0.008634\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/1/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N012993-004A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 9.4925 * 10 \\ &= 94.925\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 95$$

 8/4/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Sulfate concentration, in mg/L, in the original sample as follows:

$$\text{Sulfate, mg/L} = A * DF$$

where:


A = mg/L, IC calculated concentration
DF = dilution factor

For **N012993-009C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Sulfate, mg/L} &= 9.099 * 20 \\ &= 181.98 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Sulfate, mg/L} = 180$$

 8/4/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N012993-010D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.33320] [1] - 0.08490$$

$$\text{TOC} = 0.24830$$

Reporting results in two significant figures,

$$\text{TOC} = \mathbf{0.25} \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 8/1/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N012993-007B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.2973070404 * 1 * (25/25) \\ &= 0.2973070404 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.30$$



8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012993
Test Method: EPA 6010
Analysis Date: 7/21/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46120

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N012993-006B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N012993-006B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94232						
Client ID: ZZZZZ	Batch ID: 46120	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/21/2014	SeqNo: 1810825							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	4.775	0.040	5.000	0	95.5	80	120				
------	-------	-------	-------	---	------	----	-----	--	--	--	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N012993-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 2.48280555363899 * 1 * (25/25) \\ &= 2.48280555363899 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 2.5$$

 8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N012993
Test Method: EPA 6020
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46117

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N012993-002B-DT 5X	Chromium	µg/L	0.942828546	NA	0.802579867	17.47%	10
N012993-002B-DT 5X	Arsenic	µg/L	2.558643932	PASS	2.482805554	3.05%	10
N012993-002B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
 Work Order: N012993
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N012993-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46117	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815508						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	21.233	2.0	20.00	0.8026	102	80	120				
----------	--------	-----	-------	--------	-----	----	-----	--	--	--	--

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N012993
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N012993-002B-PS	SampType: PS	TestCode: 6020WDAsMn Units: µg/L				Prep Date:			RunNo: 94348		
Client ID: ZZZZZZ	Batch ID: 46117	TestNo: EPA 6020		EPA 3010A		Analysis Date: 7/29/2014			SeqNo: 1815591		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	23.580	0.20	20.00	2.483	105	80	120				
Manganese	198.694	1.0	200.0	0	99.3	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	

August 04, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013004

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 21, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013004

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) is outside criteria for Orthophosphate, Dissolved (as P) ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



ASSET Laboratories

Date: 04-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013004
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013004-001A	MW-761-059b-Q3	Water	7/21/2014 1:10:00 PM	7/21/2014	8/4/2014
N013004-002A	SA-MW-07D-059b-Q3	Water	7/21/2014 1:20:00 PM	7/21/2014	8/4/2014
N013004-002B	SA-MW-07D-059b-Q3	Water	7/21/2014 1:20:00 PM	7/21/2014	8/4/2014
N013004-002C	SA-MW-07D-059b-Q3	Water	7/21/2014 1:20:00 PM	7/21/2014	8/4/2014
N013004-002D	SA-MW-07D-059b-Q3	Water	7/21/2014 1:20:00 PM	7/21/2014	8/4/2014
N013004-003A	SA-MW-07S-059b-Q3	Water	7/21/2014 12:05:00 PM	7/21/2014	8/4/2014
N013004-003B	SA-MW-07S-059b-Q3	Water	7/21/2014 12:05:00 PM	7/21/2014	8/4/2014
N013004-003C	SA-MW-07S-059b-Q3	Water	7/21/2014 12:05:00 PM	7/21/2014	8/4/2014
N013004-003D	SA-MW-07S-059b-Q3	Water	7/21/2014 12:05:00 PM	7/21/2014	8/4/2014
N013004-004A	SA-MW-08D-059b-Q3	Water	7/21/2014 3:05:00 PM	7/21/2014	8/4/2014
N013004-004B	SA-MW-08D-059b-Q3	Water	7/21/2014 3:05:00 PM	7/21/2014	8/4/2014
N013004-004C	SA-MW-08D-059b-Q3	Water	7/21/2014 3:05:00 PM	7/21/2014	8/4/2014
N013004-004D	SA-MW-08D-059b-Q3	Water	7/21/2014 3:05:00 PM	7/21/2014	8/4/2014
N013004-005A	SA-MW-08S-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-005B	SA-MW-08S-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-005C	SA-MW-08S-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-005D	SA-MW-08S-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-006A	SA-MW-09D-059b-Q3	Water	7/21/2014 4:18:00 PM	7/21/2014	8/4/2014
N013004-006B	SA-MW-09D-059b-Q3	Water	7/21/2014 4:18:00 PM	7/21/2014	8/4/2014
N013004-006C	SA-MW-09D-059b-Q3	Water	7/21/2014 4:18:00 PM	7/21/2014	8/4/2014
N013004-006D	SA-MW-09D-059b-Q3	Water	7/21/2014 4:18:00 PM	7/21/2014	8/4/2014
N013004-007A	CA-MW-107D-059b-Q3	Water	7/21/2014 3:45:00 PM	7/21/2014	8/4/2014
N013004-007B	CA-MW-107D-059b-Q3	Water	7/21/2014 3:45:00 PM	7/21/2014	8/4/2014
N013004-007C	CA-MW-107D-059b-Q3	Water	7/21/2014 3:45:00 PM	7/21/2014	8/4/2014
N013004-007D	CA-MW-107D-059b-Q3	Water	7/21/2014 3:45:00 PM	7/21/2014	8/4/2014
N013004-008A	CA-MW-107S-059b-Q3	Water	7/21/2014 3:09:00 PM	7/21/2014	8/4/2014
N013004-008B	CA-MW-107S-059b-Q3	Water	7/21/2014 3:09:00 PM	7/21/2014	8/4/2014
N013004-008C	CA-MW-107S-059b-Q3	Water	7/21/2014 3:09:00 PM	7/21/2014	8/4/2014
N013004-008D	CA-MW-107S-059b-Q3	Water	7/21/2014 3:09:00 PM	7/21/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013004
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013004-009A	CA-MW-110-059b-Q3	Water	7/21/2014 11:19:00 AM	7/21/2014	8/4/2014
N013004-009B	CA-MW-110-059b-Q3	Water	7/21/2014 11:19:00 AM	7/21/2014	8/4/2014
N013004-009C	CA-MW-110-059b-Q3	Water	7/21/2014 11:19:00 AM	7/21/2014	8/4/2014
N013004-009D	CA-MW-110-059b-Q3	Water	7/21/2014 11:19:00 AM	7/21/2014	8/4/2014
N013004-010A	CA-MW-201-059b-Q3	Water	7/21/2014 12:09:00 PM	7/21/2014	8/4/2014
N013004-010B	CA-MW-201-059b-Q3	Water	7/21/2014 12:09:00 PM	7/21/2014	8/4/2014
N013004-010C	CA-MW-201-059b-Q3	Water	7/21/2014 12:09:00 PM	7/21/2014	8/4/2014
N013004-010D	CA-MW-201-059b-Q3	Water	7/21/2014 12:09:00 PM	7/21/2014	8/4/2014
N013004-011A	CA-MW-202-059b-Q3	Water	7/21/2014 1:01:00 PM	7/21/2014	8/4/2014
N013004-011B	CA-MW-202-059b-Q3	Water	7/21/2014 1:01:00 PM	7/21/2014	8/4/2014
N013004-011C	CA-MW-202-059b-Q3	Water	7/21/2014 1:01:00 PM	7/21/2014	8/4/2014
N013004-011D	CA-MW-202-059b-Q3	Water	7/21/2014 1:01:00 PM	7/21/2014	8/4/2014
N013004-012A	CA-MW-203-059b-Q3	Water	7/21/2014 1:53:00 PM	7/21/2014	8/4/2014
N013004-012B	CA-MW-203-059b-Q3	Water	7/21/2014 1:53:00 PM	7/21/2014	8/4/2014
N013004-012C	CA-MW-203-059b-Q3	Water	7/21/2014 1:53:00 PM	7/21/2014	8/4/2014
N013004-012D	CA-MW-203-059b-Q3	Water	7/21/2014 1:53:00 PM	7/21/2014	8/4/2014
N013004-013A	MW-762-059b-Q3	Water	7/21/2014 4:45:00 PM	7/21/2014	8/4/2014
N013004-014A	MW-760-059b-Q3	Water	7/21/2014 11:20:00 AM	7/21/2014	8/4/2014
N013004-015A	MW-11A-059b-Q3	Water	7/21/2014 11:11:00 AM	7/21/2014	8/4/2014
N013004-015B	MW-11A-059b-Q3	Water	7/21/2014 11:11:00 AM	7/21/2014	8/4/2014
N013004-016A	MW-11B-059b-Q3	Water	7/21/2014 1:38:00 PM	7/21/2014	8/4/2014
N013004-016B	MW-11B-059b-Q3	Water	7/21/2014 1:38:00 PM	7/21/2014	8/4/2014
N013004-016C	MW-11B-059b-Q3	Water	7/21/2014 1:38:00 PM	7/21/2014	8/4/2014
N013004-017A	MW-16-059b-Q3	Water	7/21/2014 4:31:00 PM	7/21/2014	8/4/2014
N013004-017B	MW-16-059b-Q3	Water	7/21/2014 4:31:00 PM	7/21/2014	8/4/2014
N013004-017C	MW-16-059b-Q3	Water	7/21/2014 4:31:00 PM	7/21/2014	8/4/2014
N013004-018A	MW-20-059b-Q3	Water	7/21/2014 2:11:00 PM	7/21/2014	8/4/2014
N013004-018B	MW-20-059b-Q3	Water	7/21/2014 2:11:00 PM	7/21/2014	8/4/2014
N013004-018C	MW-20-059b-Q3	Water	7/21/2014 2:11:00 PM	7/21/2014	8/4/2014
N013004-018D	MW-20-059b-Q3	Water	7/21/2014 2:11:00 PM	7/21/2014	8/4/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013004
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013004-019A	MW-924-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-019B	MW-924-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-019C	MW-924-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-019D	MW-924-059b-Q3	Water	7/21/2014 2:21:00 PM	7/21/2014	8/4/2014
N013004-020A	SA-MW-11D-059b-Q3	Water	7/21/2014 10:21:00 AM	7/21/2014	8/4/2014
N013004-020B	SA-MW-11D-059b-Q3	Water	7/21/2014 10:21:00 AM	7/21/2014	8/4/2014
N013004-020C	SA-MW-11D-059b-Q3	Water	7/21/2014 10:21:00 AM	7/21/2014	8/4/2014
N013004-020D	SA-MW-11D-059b-Q3	Water	7/21/2014 10:21:00 AM	7/21/2014	8/4/2014
N013004-021A	SA-MW-11S-059b-Q3	Water	7/21/2014 3:12:00 PM	7/21/2014	8/4/2014
N013004-021B	SA-MW-11S-059b-Q3	Water	7/21/2014 3:12:00 PM	7/21/2014	8/4/2014
N013004-021C	SA-MW-11S-059b-Q3	Water	7/21/2014 3:12:00 PM	7/21/2014	8/4/2014
N013004-021D	SA-MW-11S-059b-Q3	Water	7/21/2014 3:12:00 PM	7/21/2014	8/4/2014



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-017

Client Sample ID: MW-16-059b-Q3
Collection Date: 7/21/2014 4:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate: 7/23/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46142	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: PBW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812619						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46142	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: LCSW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812620						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		916.000	10	1000	0	91.6	80	120			

Sample ID N013006-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: ZZZZZ	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3717.143	29					3689	0.772	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-001

Client Sample ID: MW-761-059b-Q3
Collection Date: 7/21/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 06:05 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 11:52 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-07D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:20:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	880	0.80	10		µg/L	50	7/23/2014 12:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-003

Client Sample ID: SA-MW-07S-059b-Q3
Collection Date: 7/21/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	480	1.6	20		µg/L	100	7/23/2014 03:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-08D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283	PrepDate	Analyst: QBM
Hexavalent Chromium	210 0.80	10	µg/L 50 7/23/2014 12:54 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-005

Client Sample ID: SA-MW-08S-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	19	0.080	1.0		µg/L	5	7/23/2014 01:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-09D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 4:18:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 01:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	150	0.32	4.0		µg/L	20	7/23/2014 01:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:09:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283	PrepDate	Analyst: QBM
Hexavalent Chromium	2.3 0.016 0.20	µg/L	1 7/23/2014 02:03 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-009

Client Sample ID: CA-MW-110-059b-Q3
Collection Date: 7/21/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	300	0.32	4.0		µg/L	20	7/23/2014 02:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-201-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 12:09:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 02:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-202-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 02:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-203-059b-Q3
Lab Order: N013004 **Collection Date:** 7/21/2014 1:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013004-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: **IC6_140723A** QC Batch: **R94283** PrepDate Analyst: **QBM**
Hexavalent Chromium ND 0.016 0.20 µg/L 1 7/23/2014 03:43 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-013

Client Sample ID: MW-762-059b-Q3
Collection Date: 7/21/2014 4:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 06:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 05:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-014

Client Sample ID: MW-760-059b-Q3
Collection Date: 7/21/2014 11:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 06:47 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 04:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-015

Client Sample ID: MW-11A-059b-Q3
Collection Date: 7/21/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140725A	QC Batch: R94315				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/25/2014 07:08 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 04:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-016

Client Sample ID: MW-11B-059b-Q3
Collection Date: 7/21/2014 1:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	1400	3.2	40		µg/L	200	7/23/2014 05:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Chromium	1400	0.30	10		µg/L	10	7/24/2014 11:07 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-017

Client Sample ID: MW-16-059b-Q3
Collection Date: 7/21/2014 4:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	9.8	0.016	0.20		µg/L	1	7/23/2014 05:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Chromium	8.7	0.030	1.0		µg/L	1	7/23/2014 10:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-018

Client Sample ID: MW-20-059b-Q3
Collection Date: 7/21/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	700	1.6	20		µg/L	100	7/23/2014 06:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Chromium	710	0.30	10		µg/L	10	7/24/2014 11:12 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-019

Client Sample ID: MW-924-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283				PrepDate		Analyst: QBM
Hexavalent Chromium	700	1.6	20		µg/L	100	7/23/2014 06:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140724A	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Chromium	720	0.30	10		µg/L	10	7/24/2014 11:17 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-020

Client Sample ID: SA-MW-11D-059b-Q3
Collection Date: 7/21/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723A	QC Batch: R94283			PrepDate			Analyst: QBM
Hexavalent Chromium	120	0.32	4.0		µg/L	20	7/23/2014 06:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-11S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:12:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284			PrepDate			Analyst: QBM
Hexavalent Chromium	430	1.6	20		µg/L	100	7/23/2014 07:05 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94315	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: PBW	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813810						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94315	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: LCSW	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813811						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.202 0.060 0.2000 0 101 90 110

Sample ID N012914-024ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.016 0.060 0.01543 0 20

Sample ID N012914-024AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813814						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.222 0.060 0.2000 0.01543 103 90 110

Sample ID N012990-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813816						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.218 0.060 0.2000 0 109 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-001AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110	0.2177	0.113	20	

Sample ID N012990-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813819						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0	110	90	110				S

Sample ID N012990-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813823						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.229	0.060	0.2000	0.01365	107	90	110				

Sample ID N012990-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813825						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.224	0.060	0.2000	0.01237	106	90	110				

Sample ID N012990-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.267	0.060	0.2000	0.06129	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N012990-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.226	0.060	0.2000	0.01562	105	90	110				

Sample ID N012990-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813831						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0	109	90	110				

Sample ID N012929-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813835						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.01203	104	90	110				

Sample ID N013004-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813837						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Sample ID N013004-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1813839						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013004-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813841							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01332	101	90	110				

Sample ID N013004-015AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94315						
Client ID: ZZZZZZ	Batch ID: R94315	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1813843							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013004-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.092	0.20	1.000	0.05620	104	90	110				

Sample ID N013004-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812843						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.364	0.20	5.000	2.295	101	90	110				

Sample ID N013004-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812846						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0.03950	97.2	90	110				

Sample ID N013004-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.083	0.20	1.000	0.05370	103	90	110				

Sample ID N013004-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812853						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013004-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812855						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N013004-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812857						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.056	0.20	1.000	0	106	90	110				

Sample ID N013004-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0	105	90	110				

Sample ID N013004-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94283						
Client ID: ZZZZZZ	Batch ID: R94283	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	14.901	0.20	5.000	9.750	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID LCS-R94284	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: LCSW	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.064	0.20	5.000	0	101	90	110				

Sample ID MB-R94284	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: PBW	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID N013015-001ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.844	0.20						3.762	2.16	20	

Sample ID N013015-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.880	0.20	5.000	3.762	102	90	110				

Sample ID N013015-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812884						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.923	0.20	5.000	3.762	103	90	110	8.880	0.488	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812886						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.135	0.20	5.000	2.043	102	90	110
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Sample ID N013015-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.630	0.20	5.000	5.430	104	90	110
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Sample ID N013015-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812890						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.089	0.20	1.000	2.092	99.7	90	110
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Sample ID N013015-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812894						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.369	0.20	1.000	1.307	106	90	110
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Sample ID N013015-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812896						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.149	0.20	1.000	0.08020	107	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812898						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.847	0.20	1.000	2.774	107	90	110
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Sample ID N013015-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812902						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.384	0.20	1.000	1.387	99.7	90	110
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Sample ID N013015-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1812904						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.830	0.20	1.000	1.794	104	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46127	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: PBW	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46127	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: LCSW	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.555 1.0 10.00 0 95.6 85 115

Sample ID N013007-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: ZZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812547						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.062 1.0 10.00 2.924 91.4 75 125

Sample ID N013007-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: ZZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812548						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.179 1.0 10.00 2.924 92.5 75 125 12.06 0.962 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-002

Client Sample ID: SA-MW-07D-059b-Q3
Collection Date: 7/21/2014 1:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	110	0.33	5.0		mg/L	10	7/22/2014 10:53 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	3.1	0.010	0.10		mg/L	2	7/22/2014 10:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-003

Client Sample ID: SA-MW-07S-059b-Q3
Collection Date: 7/21/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270						Analyst: PS
Sulfate	79	0.33	5.0		mg/L	10	7/22/2014 11:06 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269						Analyst: PS
Nitrate as N	2.6	0.010	0.10		mg/L	2	7/22/2014 10:22 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-004

Client Sample ID: SA-MW-08D-059b-Q3
Collection Date: 7/21/2014 3:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	55	0.33	5.0		mg/L	10	7/22/2014 11:18 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	1.3	0.0051	0.050		mg/L	1	7/22/2014 11:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-005

Client Sample ID: SA-MW-08S-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	24	0.16	2.5		mg/L	5	7/22/2014 11:31 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	0.12	0.0051	0.050		mg/L	1	7/22/2014 11:22 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-006

Client Sample ID: SA-MW-09D-059b-Q3
Collection Date: 7/21/2014 4:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	22	0.066	1.0		mg/L	2	7/22/2014 11:44 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/22/2014 11:34 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-007

Client Sample ID: CA-MW-107D-059b-Q3
Collection Date: 7/21/2014 3:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/22/2014 07:31 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/22/2014 11:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	4.1	0.026	0.25		mg/L	5	7/22/2014 11:47 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-008

Client Sample ID: CA-MW-107S-059b-Q3
Collection Date: 7/21/2014 3:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/22/2014 07:44 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	140	0.66	10		mg/L	20	7/23/2014 12:09 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	2.3	0.010	0.10		mg/L	2	7/22/2014 12:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-009

Client Sample ID: CA-MW-110-059b-Q3
Collection Date: 7/21/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	210	0.66	10		mg/L	20	7/23/2014 12:22 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	9.8	0.051	0.50		mg/L	10	7/22/2014 12:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-010

Client Sample ID: CA-MW-201-059b-Q3
Collection Date: 7/21/2014 12:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	170	0.66	10		mg/L	20	7/23/2014 12:34 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/22/2014 12:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-011

Client Sample ID: CA-MW-202-059b-Q3
Collection Date: 7/21/2014 1:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/23/2014 12:47 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/22/2014 01:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-012

Client Sample ID: CA-MW-203-059b-Q3
Collection Date: 7/21/2014 1:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271						Analyst: PS
Sulfate	220	0.66	10		mg/L	20	7/23/2014 03:06 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269						Analyst: PS
Nitrate as N	2.8	0.026	0.25		mg/L	5	7/22/2014 01:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-018

Client Sample ID: MW-20-059b-Q3
Collection Date: 7/21/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271						Analyst: PS
Sulfate	64	0.33	5.0		mg/L	10	7/23/2014 03:18 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269						Analyst: PS
Nitrate as N	3.1	0.026	0.25		mg/L	5	7/22/2014 01:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-019

Client Sample ID: MW-924-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271						Analyst: PS
Sulfate	63	0.33	5.0		mg/L	10	7/23/2014 03:56 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269						Analyst: PS
Nitrate as N	3.2	0.010	0.10		mg/L	2	7/22/2014 04:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-020

Client Sample ID: SA-MW-11D-059b-Q3
Collection Date: 7/21/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271				PrepDate		Analyst: PS
Sulfate	66	0.33	5.0		mg/L	10	7/23/2014 04:09 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	1.1	0.0051	0.050		mg/L	1	7/22/2014 02:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-021

Client Sample ID: SA-MW-11S-059b-Q3
Collection Date: 7/21/2014 3:12:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271						Analyst: PS
Sulfate	98	0.33	5.0		mg/L	10	7/23/2014 04:22 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269						Analyst: PS
Nitrate as N	10	0.051	0.50		mg/L	10	7/22/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID	SampType	TestCode	Units	Prep Date	RunNo						
MB-R94270_PO4	MBLK	300_W_PO4P	mg/L		94270						
Client ID: PBW	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812445						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	ND	0.10									
LCS-R94270_PO4	LCS	300_W_PO4P	mg/L		94270						
Client ID: LCSW	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812446						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	2.410	0.10	2.500	0	96.4	90	110				
N013004-008C-DUP	DUP	300_W_PO4P	mg/L		94270						
Client ID: ZZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	ND	0.10						0	0	20	
N013004-008C-MS	MS	300_W_PO4P	mg/L		94270						
Client ID: ZZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	1.192	0.10	2.500	0	47.7	80	120				S
N013004-008C-MSD	MSD	300_W_PO4P	mg/L		94270						
Client ID: ZZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	1.568	0.10	2.500	0	62.7	80	120	1.192	27.2	20	SR

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94270_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94270						
Client ID: PBW	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812483						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94270_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94270						
Client ID: LCSW	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 5.002 0.50 5.000 0 100 90 110

Sample ID N013004-002C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94270						
Client ID: ZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812502						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 107.260 5.0 106.2 1.00 20

Sample ID N013004-002C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94270						
Client ID: ZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812503						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 159.240 5.0 50.00 106.2 106 80 120

Sample ID N013004-002C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94270						
Client ID: ZZZZZ	Batch ID: R94270	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812504						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 160.200 5.0 50.00 106.2 108 80 120 159.2 0.601 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94271_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94271						
Client ID: PBW	Batch ID: R94271	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94271_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94271						
Client ID: LCSW	Batch ID: R94271	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 4.957 0.50 5.000 0 99.1 90 110

Sample ID N013004-018C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94271						
Client ID: ZZZZZ	Batch ID: R94271	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 65.090 5.0 63.92 1.81 20

Sample ID N013004-018C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94271						
Client ID: ZZZZZ	Batch ID: R94271	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812392						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 115.040 5.0 50.00 63.92 102 80 120

Sample ID N013004-018C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94271						
Client ID: ZZZZZ	Batch ID: R94271	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1812393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 112.970 5.0 50.00 63.92 98.1 80 120 115.0 1.82 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013004-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	9.120	0.25	5.000	4.110	100	80	120	8.905	2.39	20	

Sample ID N013004-011C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.906	0.050	1.000	0	90.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-07D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:20:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/24/2014 01:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-003

Client Sample ID: SA-MW-07S-059b-Q3
Collection Date: 7/21/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/24/2014 01:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-004

Client Sample ID: SA-MW-08D-059b-Q3
Collection Date: 7/21/2014 3:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-005

Client Sample ID: SA-MW-08S-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 02:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-09D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 4:18:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 03:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 04:03 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:09:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 04:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-009

Client Sample ID: CA-MW-110-059b-Q3
Collection Date: 7/21/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 04:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-010

Client Sample ID: CA-MW-201-059b-Q3
Collection Date: 7/21/2014 12:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	7/24/2014 05:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-011

Client Sample ID: CA-MW-202-059b-Q3
Collection Date: 7/21/2014 1:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 05:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-203-059b-Q3
Lab Order: N013004 **Collection Date:** 7/21/2014 1:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013004-012

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140724A** QC Batch: **R94302** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 7/24/2014 12:36 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-018

Client Sample ID: MW-20-059b-Q3
Collection Date: 7/21/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 05:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-019

Client Sample ID: MW-924-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/24/2014 07:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-020

Client Sample ID: SA-MW-11D-059b-Q3
Collection Date: 7/21/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/24/2014 07:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-021

Client Sample ID: SA-MW-11S-059b-Q3
Collection Date: 7/21/2014 3:12:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	7/24/2014 07:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94302	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302						
Client ID: PBW	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813539						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94302	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302						
Client ID: LCSW	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813540						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	10.481	1.0	10.00	0	105	85	115				
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Sample ID N013004-012D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302						
Client ID: ZZZZZ	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813541						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	10.078	1.0	10.00	0.8086	92.7	75	125				
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Sample ID N013004-012D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302						
Client ID: ZZZZZ	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	9.729	1.0	10.00	0.8086	89.2	75	125	10.08	3.53	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-07D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:20:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 03:10 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-003

Client Sample ID: SA-MW-07S-059b-Q3
Collection Date: 7/21/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 03:31 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-08D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 03:35 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-08S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 2:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 03:40 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-09D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 4:18:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	0.030 0.0013	0.020 mg/L	1 7/24/2014 03:53 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:09:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 04:04 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-009

Client Sample ID: CA-MW-110-059b-Q3
Collection Date: 7/21/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	0.14	0.0013	0.020	mg/L	1	7/24/2014 04:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-010

Client Sample ID: CA-MW-201-059b-Q3
Collection Date: 7/21/2014 12:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	0.025	0.0013	0.020	mg/L	1	7/24/2014 04:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-011

Client Sample ID: CA-MW-202-059b-Q3
Collection Date: 7/21/2014 1:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	2.6	0.0013	0.020	mg/L	1	7/24/2014 04:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-203-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	0.12 0.0013	0.020	mg/L 1 7/24/2014 04:23 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-015

Client Sample ID: MW-11A-059b-Q3
Collection Date: 7/21/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI	
Iron	0.74	0.0013	0.020	mg/L	1	7/24/2014 04:28 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-016

Client Sample ID: MW-11B-059b-Q3
Collection Date: 7/21/2014 1:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 04:34 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-017

Client Sample ID: MW-16-059b-Q3
Collection Date: 7/21/2014 4:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 04:39 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-018

Client Sample ID: MW-20-059b-Q3
Collection Date: 7/21/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 04:52 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-019

Client Sample ID: MW-924-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 04:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-020

Client Sample ID: SA-MW-11D-059b-Q3
Collection Date: 7/21/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148			PrepDate	7/24/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 05:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-11S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:12:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46148	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 05:05 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46148	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: PBW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813183
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.001	0.020			

Sample ID LCS1-46148	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: LCSW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813184
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.101	0.020	0.1000	0	101 85 115

Sample ID N013004-002B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813188
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.095	0.020	0.1000	0	94.9 75 125

Sample ID N013004-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813189
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.099	0.020	0.1000	0	98.9 75 125 0.09492 4.12 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-002

Client Sample ID: SA-MW-07D-059b-Q3
Collection Date: 7/21/2014 1:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	0.70	0.027	0.10	µg/L	1	7/23/2014 08:34 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 08:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-003

Client Sample ID: SA-MW-07S-059b-Q3
Collection Date: 7/21/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Arsenic	2.3	0.027	0.10		µg/L	1	7/23/2014 08:39 PM
Manganese	ND	0.026	0.50		µg/L	1	7/23/2014 08:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-08D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10	µg/L	1	7/23/2014 08:45 PM
Manganese	16	0.026	0.50	µg/L	1	7/23/2014 08:45 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-08S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 2:21:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014		Analyst: CEI
Arsenic	2.0	0.027	0.10		µg/L	1	7/23/2014 09:01 PM
Manganese	3.5	0.026	0.50		µg/L	1	7/23/2014 09:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-09D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 4:18:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014		Analyst: CEI
Arsenic	22	0.027	0.10		µg/L	1	7/23/2014 09:07 PM
Manganese	4800	1.3	25		µg/L	50	7/24/2014 11:22 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107D-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014		Analyst: CEI
Arsenic	0.89	0.027	0.10		µg/L	1	7/23/2014 09:12 PM
Manganese	2.9	0.026	0.50		µg/L	1	7/23/2014 09:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-107S-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 3:09:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10	µg/L	1	7/23/2014 09:18 PM
Manganese	1100	0.26	5.0	µg/L	10	7/24/2014 10:45 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-009

Client Sample ID: CA-MW-110-059b-Q3
Collection Date: 7/21/2014 11:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Arsenic	0.45	0.027	0.10		µg/L	1	7/23/2014 09:23 PM
Manganese	6.4	0.026	0.50		µg/L	1	7/23/2014 09:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-010

Client Sample ID: CA-MW-201-059b-Q3
Collection Date: 7/21/2014 12:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	0.56	0.027	0.10	µg/L	1	7/23/2014 09:29 PM
Manganese	1100	0.26	5.0	µg/L	10	7/24/2014 10:50 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-202-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014		Analyst: CEI
Arsenic	5.5	0.027	0.10		µg/L	1	7/23/2014 09:34 PM
Manganese	180	0.026	0.50		µg/L	1	7/23/2014 09:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-203-059b-Q3
Lab Order: N013004	Collection Date: 7/21/2014 1:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013004-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	0.48	0.027	0.10		µg/L	7/23/2014 09:40 PM
Manganese	1000	0.26	5.0		µg/L	7/24/2014 10:56 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-015

Client Sample ID: MW-11A-059b-Q3
Collection Date: 7/21/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI	
Arsenic	2.4	0.027	0.10		µg/L	1	7/23/2014 09:45 PM
Manganese	960	0.26	5.0		µg/L	10	7/24/2014 11:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-016

Client Sample ID: MW-11B-059b-Q3
Collection Date: 7/21/2014 1:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate: 7/23/2014		Analyst: CEI
Arsenic	0.92	0.027	0.10		µg/L	1	7/23/2014 09:51 PM
Manganese	ND	0.026	0.50		µg/L	1	7/23/2014 09:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-017

Client Sample ID: MW-16-059b-Q3
Collection Date: 7/21/2014 4:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI	
Arsenic	0.38	0.027	0.10	µg/L	1	7/23/2014 10:26 PM	
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 10:26 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-018

Client Sample ID: MW-20-059b-Q3
Collection Date: 7/21/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/23/2014 10:31 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 10:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-019

Client Sample ID: MW-924-059b-Q3
Collection Date: 7/21/2014 2:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	7/23/2014 10:37 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 10:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-020

Client Sample ID: SA-MW-11D-059b-Q3
Collection Date: 7/21/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127			PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10	µg/L	1	7/23/2014 10:42 PM
Manganese	ND	0.026	0.50	µg/L	1	7/23/2014 10:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 04-Aug-14

CLIENT: CH2M HILL
Lab Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013004-021

Client Sample ID: SA-MW-11S-059b-Q3
Collection Date: 7/21/2014 3:12:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10		µg/L	1	7/23/2014 10:46 PM
Manganese	ND	0.026	0.50		µg/L	1	7/23/2014 10:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013004
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	MB-46127	SampType:	MBLK	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94274
Client ID:	PBW	Batch ID:	46127	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/23/2014	SeqNo:	1812735
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	0.030	0.50									

Sample ID	LCS-46127	SampType:	LCS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94274
Client ID:	LCSW	Batch ID:	46127	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/23/2014	SeqNo:	1812736
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.824	0.10	10.00	0	98.2	85	115				
Manganese	94.020	0.50	100.0	0	94.0	85	115				

Sample ID	N013007-001B-MS	SampType:	MS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94274
Client ID:	ZZZZZ	Batch ID:	46127	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/23/2014	SeqNo:	1812740
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.515	0.10	10.00	0.5059	100	75	125				
Manganese	84.955	0.50	100.0	0	85.0	75	125				

Sample ID	N013007-001B-MSD	SampType:	MSD	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94274
Client ID:	ZZZZZ	Batch ID:	46127	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/23/2014	SeqNo:	1812741
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.376	0.10	10.00	0.5059	98.7	75	125	10.52	1.33	20	
Manganese	85.562	0.50	100.0	0	85.6	75	125	84.96	0.711	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/21/2014 Workorder: N013004
 Rep sample Temp (Deg C): 3.2/2.7/3.6/3.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/22/2014

Reviewed By:

 07/28/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013004-017C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.3945-64.2757)*1000000}{100}$$

1188 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1200.00 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/23/2014								TDS/CONDUCTIVITY
Date Finished: 7/24/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46142	100	64.1082	64.1085	3	1	3.00		
LCS-46142	100	63.5094	63.601	916	1	916.00		
N013004-017C	100	64.2757	64.3945	1188	1	1188.00	1748	0.68
N013005-002D	100	61.3627	61.3974	347	1	347.00	585	0.59
N013006-001D	35	63.9944	64.1235	1291	2.8571429	3688.57	4390	0.84
N013006-001D-DUP	35	63.9733	64.1034	1301	2.8571429	3717.14	4390	0.85
N013006-003D	40	63.7997	63.9125	1128	2.5	2820.00	3630	0.78
N013006-004D	40	62.9951	63.1085	1134	2.5	2835.00	3620	0.78
N013006-005D	35	63.7795	63.9005	1210	2.8571429	3457.14	4360	0.79
N013006-006D	35	60.8345	60.9543	1198	2.8571429	3422.86	4280	0.80
N013006-007D	30	60.5341	60.6416	1075	3.3333333	3583.33	4470	0.80
N013006-008D	100	64.2564	64.3451	887	1	887.00	1300	0.68
N013006-009D	100	60.7731	60.899	1259	1	1259.00	1767	0.71
N013008-001C	100	60.6356	60.7747	1391	1	1391.00	1912	0.73

mer
7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013004-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.01122 * 1 \\ &= 0.01122\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/4/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013004-020A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 5.9331 * 20 \\ &= 118.662\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 120$$

 8/4/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013004-002C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.539 * 2 \\ &= 3.078 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 3.1$$

 8/4/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N013004-006D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.57390] [1] - 0.06430$$

$$\text{TOC} = 0.50960$$

Reporting results in two significant figures,

$$\text{TOC} = 0.51 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 7/31/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013004-006B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.02973162302 * 1 * (25/25) \\ &= 0.02973162302 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = \mathbf{0.030}$$

 8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013004
Test Method: EPA 6010
Analysis Date: 7/24/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46148

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013004-002B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013004-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94293						
Client ID: ZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1813187							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	5.157	0.040	5.000	0	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013004-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 0.69765086125 * 1 * (25/25) \\ &= 0.69765086125 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 0.70$$

 8/4/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013004
Test Method: EPA 6020
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46127

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr, As & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013007-001B-DT 5X	Chromium	µg/L	3.080626461	NA	2.923934478	5.36%	10
N013007-001B-DT 5X	Arsenic	µg/L	0.530490906	NA	0.505920855	4.86%	10
N013007-001B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013007-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812546						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.867	2.0	20.00	2.924	94.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013004
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013007-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812739						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.644	0.20	20.00	0.5059	101	80	120				
Manganese	178.553	1.0	200.0	0	89.3	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

August 05, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013005

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 21, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013005

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.196 ug/L) and hexavalent chromium (1.325 ug/L) for sample N013005-004 (MW-81S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.404 and 1.443 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 05-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013005
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013005-001A	MW-855-059-Q3	Water	7/21/2014 3:50:00 PM	7/21/2014	8/5/2014
N013005-002A	MW-57-059-Q3	Water	7/21/2014 10:58:00 AM	7/21/2014	8/5/2014
N013005-002B	MW-57-059-Q3	Water	7/21/2014 10:58:00 AM	7/21/2014	8/5/2014
N013005-002C	MW-57-059-Q3	Water	7/21/2014 10:58:00 AM	7/21/2014	8/5/2014
N013005-002D	MW-57-059-Q3	Water	7/21/2014 10:58:00 AM	7/21/2014	8/5/2014
N013005-003A	MW-57D-059-Q3	Water	7/21/2014 10:19:00 AM	7/21/2014	8/5/2014
N013005-003B	MW-57D-059-Q3	Water	7/21/2014 10:19:00 AM	7/21/2014	8/5/2014
N013005-004A	MW-81S-059-Q3	Water	7/21/2014 1:09:00 PM	7/21/2014	8/5/2014
N013005-004B	MW-81S-059-Q3	Water	7/21/2014 1:09:00 PM	7/21/2014	8/5/2014
N013005-005A	MW-118S-059-Q3	Water	7/21/2014 2:49:00 PM	7/21/2014	8/5/2014
N013005-005B	MW-118S-059-Q3	Water	7/21/2014 2:49:00 PM	7/21/2014	8/5/2014
N013005-006A	MW-119D-059-Q3	Water	7/21/2014 12:29:00 PM	7/21/2014	8/5/2014
N013005-006B	MW-119D-059-Q3	Water	7/21/2014 12:29:00 PM	7/21/2014	8/5/2014
N013005-007A	MW-119S-059-Q3	Water	7/21/2014 11:44:00 AM	7/21/2014	8/5/2014
N013005-007B	MW-119S-059-Q3	Water	7/21/2014 11:44:00 AM	7/21/2014	8/5/2014
N013005-008A	MW-62A-059-Q3	Water	7/21/2014 10:31:00 AM	7/21/2014	8/5/2014
N013005-008B	MW-62A-059-Q3	Water	7/21/2014 10:31:00 AM	7/21/2014	8/5/2014
N013005-009A	MW-62B-059-Q3	Water	7/21/2014 11:17:00 AM	7/21/2014	8/5/2014
N013005-009B	MW-62B-059-Q3	Water	7/21/2014 11:17:00 AM	7/21/2014	8/5/2014
N013005-010A	MW-62C-059-Q3	Water	7/21/2014 2:00:00 PM	7/21/2014	8/5/2014
N013005-010B	MW-62C-059-Q3	Water	7/21/2014 2:00:00 PM	7/21/2014	8/5/2014
N013005-011A	MW-854-059-Q3	Water	7/21/2014 4:05:00 PM	7/21/2014	8/5/2014
N013005-012A	MW-110D-059-Q3	Water	7/21/2014 2:00:00 PM	7/21/2014	8/5/2014
N013005-012B	MW-110D-059-Q3	Water	7/21/2014 2:00:00 PM	7/21/2014	8/5/2014
N013005-013A	MW-110S-059-Q3	Water	7/21/2014 1:29:00 PM	7/21/2014	8/5/2014
N013005-013B	MW-110S-059-Q3	Water	7/21/2014 1:29:00 PM	7/21/2014	8/5/2014
N013005-014A	MW-116D1-059-Q3	Water	7/21/2014 3:17:00 PM	7/21/2014	8/5/2014
N013005-014B	MW-116D1-059-Q3	Water	7/21/2014 3:17:00 PM	7/21/2014	8/5/2014
N013005-015A	MW-116D2-059-Q3	Water	7/21/2014 3:53:00 PM	7/21/2014	8/5/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013005
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013005-015B	MW-116D2-059-Q3	Water	7/21/2014 3:53:00 PM	7/21/2014	8/5/2014
N013005-016A	MW-116S-059-Q3	Water	7/21/2014 2:42:00 PM	7/21/2014	8/5/2014
N013005-016B	MW-116S-059-Q3	Water	7/21/2014 2:42:00 PM	7/21/2014	8/5/2014
N013005-017A	MW-11C-059-Q3	Water	7/21/2014 12:38:00 PM	7/21/2014	8/5/2014
N013005-017B	MW-11C-059-Q3	Water	7/21/2014 12:38:00 PM	7/21/2014	8/5/2014
N013005-018A	MW-970-059-Q3	Water	7/21/2014 12:48:00 PM	7/21/2014	8/5/2014
N013005-018B	MW-970-059-Q3	Water	7/21/2014 12:48:00 PM	7/21/2014	8/5/2014



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	350	10	10	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46142	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: PBW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812619						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46142	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: LCSW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812620						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		916.000	10	1000	0	91.6	80	120			

Sample ID N013006-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: ZZZZZ	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3717.143	29					3689	0.772	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-001

Client Sample ID: MW-855-059-Q3
Collection Date: 7/21/2014 3:50:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 12:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/22/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/22/2014 05:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/29/2014 08:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-003

Client Sample ID: MW-57D-059-Q3
Collection Date: 7/21/2014 10:19:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/22/2014 05:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/29/2014 09:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-004

Client Sample ID: MW-81S-059-Q3
Collection Date: 7/21/2014 1:09:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/22/2014 05:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	7/29/2014 09:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-005

Client Sample ID: MW-118S-059-Q3
Collection Date: 7/21/2014 2:49:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/22/2014 06:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/29/2014 09:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-006

Client Sample ID: MW-119D-059-Q3
Collection Date: 7/21/2014 12:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/23/2014 11:43 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	7/29/2014 09:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-007

Client Sample ID: MW-119S-059-Q3
Collection Date: 7/21/2014 11:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/23/2014 12:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/29/2014 10:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-008

Client Sample ID: MW-62A-059-Q3
Collection Date: 7/21/2014 10:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/23/2014 12:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/29/2014 10:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-009

Client Sample ID: MW-62B-059-Q3
Collection Date: 7/21/2014 11:17:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 12:41 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 01:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/29/2014 10:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-010

Client Sample ID: MW-62C-059-Q3
Collection Date: 7/21/2014 2:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 01:13 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 01:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/29/2014 10:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-011

Client Sample ID: MW-854-059-Q3
Collection Date: 7/21/2014 4:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 02:21 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 01:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-012

Client Sample ID: MW-110D-059-Q3
Collection Date: 7/21/2014 2:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/23/2014 02:16 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/29/2014 10:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-013

Client Sample ID: MW-110S-059-Q3
Collection Date: 7/21/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	3.9	0.016	0.20		µg/L	1	7/23/2014 02:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	4.5	0.030	1.0		µg/L	1	7/29/2014 10:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-014

Client Sample ID: MW-116D1-059-Q3
Collection Date: 7/21/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/23/2014 03:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	7/29/2014 10:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-015

Client Sample ID: MW-116D2-059-Q3
Collection Date: 7/21/2014 3:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/23/2014 03:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/29/2014 10:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-016

Client Sample ID: MW-116S-059-Q3
Collection Date: 7/21/2014 2:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/23/2014 03:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/29/2014 10:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-017

Client Sample ID: MW-11C-059-Q3
Collection Date: 7/21/2014 12:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 02:42 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 04:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/29/2014 10:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-018

Client Sample ID: MW-970-059-Q3
Collection Date: 7/21/2014 12:48:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 03:03 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 05:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate	7/23/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/29/2014 11:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94368	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: PBW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816306						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94368	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: LCSW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.196 0.060 0.2000 0 98.0 90 110

Sample ID N013005-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816309						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.018 0.060 0.01905 0 20

Sample ID N013005-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816310						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.215 0.060 0.2000 0.01905 97.8 90 110

Sample ID N013005-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.213 0.060 0.2000 0.01606 98.2 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110				

Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110				

Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110				

Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110				

Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110				
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Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110				
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Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012993-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812259						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID N012993-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.539	0.20	1.000	0.5306	101	90	110				

Sample ID N012993-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0.03490	99.8	90	110				

Sample ID N012993-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N012993-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.303	0.20	5.000	5.252	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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TestCode: 218.6_WPGE

Sample ID N012993-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.457	0.20	1.000	0.4355	102	90	110				

Sample ID N013005-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0	101	90	110				

Sample ID N013005-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812287						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.301	0.20	1.000	2.300	100	90	110				

Sample ID N013005-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.559	0.20	1.000	2.573	98.5	90	110				

Sample ID N013005-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.353	0.20	1.000	1.325	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N013005-005A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:	RunNo:														
Client ID:	ZZZZZZ	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812293												
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual	
Hexavalent Chromium		3.230		0.20		1.000		2.238		99.1		90		110									

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-007A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.291	0.20	1.000	2.321	97.0	90	110	3.290	0.0365	20	

Sample ID N013005-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812993						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.293	0.20	1.000	1.308	98.5	90	110				

Sample ID N013005-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812997						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N013005-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				

Sample ID N013005-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.428	0.20	1.000	1.449	97.9	90	110
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Sample ID N013005-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.921	0.20	5.000	3.875	101	90	110
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Sample ID N013005-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.619	0.20	1.000	1.622	99.7	90	110
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Sample ID N013005-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.479	0.20	1.000	1.443	104	90	110
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Sample ID N013005-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.160	0.20	1.000	1.182	97.8	90	110
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Qualifiers:

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|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.011	0.20	1.000	0	101	90	110				

Sample ID N013005-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813016						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.007	0.20	1.000	0	101	90	110				

Sample ID N013016-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813021						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.752	0.20	1.000	2.720	103	90	110				

Sample ID N013016-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.626	0.20	1.000	2.631	99.5	90	110				

Sample ID N013016-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.416	0.20	5.000	11.37	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.841	0.20	5.000	3.774	101	90	110				

Sample ID N013016-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813030						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.088	0.20	1.000	0.06710	102	90	110				

Sample ID N013016-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.456	0.20	1.000	2.444	101	90	110				

Sample ID N013016-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813034						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.087	0.20	1.000	2.053	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46129	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94348						
Client ID: PBW	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46129	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94348						
Client ID: LCSW	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815527						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.311 1.0 10.00 0 103 85 115

Sample ID N013005-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815531						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.536 1.0 10.00 2.687 98.5 75 125

Sample ID N013005-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815532						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.495 1.0 10.00 2.687 98.1 75 125 12.54 0.330 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ALKALINITY, SPECIATED

SM 2320 B

RunID: WETCHEM_140723B	QC Batch: R94257	PrepDate	Analyst: LCC
Alkalinity, Bicarbonate (As CaCO3)	140 1.2	5.0 mg/L	1 7/23/2014
Alkalinity, Carbonate (As CaCO3)	ND 1.2	5.0 mg/L	1 7/23/2014
Alkalinity, Hydroxide (As CaCO3)	ND 1.2	5.0 mg/L	1 7/23/2014
Alkalinity, Total (As CaCO3)	140 1.2	5.0 mg/L	1 7/23/2014

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID	LCS-R94257	SampType: LCS	TestCode: 2320_W_SP	Units: mg/L	Prep Date:	RunNo: 94257					
Client ID:	LCSW	Batch ID: R94257	TestNo: SM 2320 B	Analysis Date: 7/23/2014	SeqNo: 1811916						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	102.113	5.0	100.0	0	102	85	115				
Alkalinity, Total (As CaCO3)	104.460	5.0	100.0	0	104	85	115				

Sample ID	LCSD-R94257	SampType: LCSD	TestCode: 2320_W_SP	Units: mg/L	Prep Date:	RunNo: 94257					
Client ID:	LCSS02	Batch ID: R94257	TestNo: SM 2320 B	Analysis Date: 7/23/2014	SeqNo: 1811917						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	102.113	5.0	100.0	0	102	85	115	102.1	0	20	
Alkalinity, Total (As CaCO3)	104.460	5.0	100.0	0	104	85	115	104.5	0	20	

Sample ID	MB-R94257	SampType: MBLK	TestCode: 2320_W_SP	Units: mg/L	Prep Date:	RunNo: 94257					
Client ID:	PBW	Batch ID: R94257	TestNo: SM 2320 B	Analysis Date: 7/23/2014	SeqNo: 1811918						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.0									
Alkalinity, Carbonate (As CaCO3)	ND	5.0									
Alkalinity, Hydroxide (As CaCO3)	ND	5.0									
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID	N013005-002D-DUP	SampType: DUP	TestCode: 2320_W_SP	Units: mg/L	Prep Date:	RunNo: 94257					
Client ID:	ZZZZZ	Batch ID: R94257	TestNo: SM 2320 B	Analysis Date: 7/23/2014	SeqNo: 1811920						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Bicarbonate (As CaCO3)	142.019	5.0						142.0	0	30	
Alkalinity, Carbonate (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Hydroxide (As CaCO3)	ND	5.0						0	0	30	
Alkalinity, Total (As CaCO3)	142.019	5.0						142.0	0	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270				PrepDate		Analyst: PS
Chloride	69	0.50	10		mg/L	20	7/22/2014 10:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722C	QC Batch: R94271				PrepDate		Analyst: PS
Sulfate	49	0.16	2.5		mg/L	5	7/23/2014 04:34 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	2.2	0.010	0.10		mg/L	2	7/22/2014 05:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94270_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	PBW	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812465			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		ND		0.50										
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Sample ID	LCS-R94270_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	LCSW	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812466			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		2.462		0.50	2.500	0		98.5	90	110				
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Sample ID	N013005-002C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	ZZZZZ	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1812474			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		118.280		10	50.00	69.00		98.6	80	120				
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Sample ID	N013005-002C-MSD	SampType:	MSD	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	ZZZZZ	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1812475			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		119.020		10	50.00	69.00		100	80	120	118.3	0.624	20	
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Qualifiers:

- | | | | | | |
|----|---|--------------------------------------|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | Calculations are based on raw values | | | |



CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013004-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	9.120	0.25	5.000	4.110	100	80	120	8.905	2.39	20	

Sample ID N013004-011C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.906	0.050	1.000	0	90.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

RunID: ICP2_140724B	EPA 3010A			EPA 6010B			Analyst: CEI
	QC Batch: 46148			PrepDate	7/24/2014		
Calcium	42	0.058	0.50	mg/L	1	7/24/2014 05:10 PM	
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 05:10 PM	
Magnesium	7.3	0.011	0.10	mg/L	1	7/24/2014 05:10 PM	
Potassium	3.1	0.016	2.5	mg/L	5	7/30/2014 02:16 PM	
Sodium	70	0.37	2.5	mg/L	5	7/30/2014 02:16 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46148	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: PBW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813183
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	ND	0.50			
Iron	0.001	0.020			
Magnesium	ND	0.10			

Sample ID LCS1-46148	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: LCSW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813184
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	9.730	0.50	10.00	0	97.3 85 115
Iron	0.101	0.020	0.1000	0	101 85 115
Magnesium	9.851	0.10	10.00	0	98.5 85 115

Sample ID N013004-002B-MS1	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813188
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	72.200	0.50	10.00	62.73	94.7 75 125
Iron	0.095	0.020	0.1000	0	94.9 75 125
Magnesium	21.684	0.10	10.00	11.40	103 75 125

Sample ID N013004-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813189
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Calcium	71.632	0.50	10.00	62.73	89.0 75 125 72.20 0.789 20
Iron	0.099	0.020	0.1000	0	98.9 75 125 0.09492 4.12 20
Magnesium	21.208	0.10	10.00	11.40	98.1 75 125 21.68 2.22 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46148	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94355						
Client ID: PBW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/30/2014	SeqNo: 1815857						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID LCS2-46148	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94355						
Client ID: LCSW	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/30/2014	SeqNo: 1815858						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19.335	0.50	20.00	0	96.7	85	115				
Sodium	19.150	0.50	20.00	0	95.8	85	115				

Sample ID N013005-002B-MS2	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94355						
Client ID: ZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/30/2014	SeqNo: 1815862						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.677	2.5	20.00	3.091	103	75	125				
Sodium	89.031	2.5	20.00	69.56	97.4	75	125				

Sample ID N013005-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94355						
Client ID: ZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/30/2014	SeqNo: 1815863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	24.109	2.5	20.00	3.091	105	75	125	23.68	1.81	20	
Sodium	90.184	2.5	20.00	69.56	103	75	125	89.03	1.29	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013005-002

Client Sample ID: MW-57-059-Q3
Collection Date: 7/21/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46129				PrepDate: 7/23/2014		Analyst: CEI
Arsenic	1.2	0.027	0.10		µg/L	1	7/29/2014 08:52 PM
Manganese	ND	0.026	0.50		µg/L	1	7/29/2014 08:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013005
 Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	MB-46129	SampType:	MBLK	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94348			
Client ID:	PBW	Batch ID:	46129	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/29/2014	SeqNo:	1815607			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		ND		0.10										
Manganese		0.058		0.50										

Sample ID	LCS-46129	SampType:	LCS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94348			
Client ID:	LCSW	Batch ID:	46129	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/29/2014	SeqNo:	1815610			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		10.317		0.10	10.00	0		103	85	115				
Manganese		100.564		0.50	100.0	0		101	85	115				

Sample ID	N013005-002B-MS	SampType:	MS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94348			
Client ID:	ZZZZZ	Batch ID:	46129	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/29/2014	SeqNo:	1815614			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		11.453		0.10	10.00	1.151		103	75	125				
Manganese		95.545		0.50	100.0	0		95.5	75	125				

Sample ID	N013005-002B-MSD	SampType:	MSD	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	7/23/2014	RunNo:	94348			
Client ID:	ZZZZZ	Batch ID:	46129	TestNo:	EPA 6020 EPA 3010A			Analysis Date:	7/29/2014	SeqNo:	1815615			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		11.514		0.10	10.00	1.151		104	75	125	11.45	0.531	20	
Manganese		95.821		0.50	100.0	0		95.8	75	125	95.54	0.289	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: Preservatives: Filtered: Holding Time (days):							Number of Containers	COMMENTS	
SAMPLE ID	DATE	TIME	Matrix	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C	500 ml Poly HNO3, 4°C	500 ml Poly HNO3, 4°C	500 ml Poly HNO3, 4°C	1000ml Poly 4°C	1000ml Poly 4°C	1000ml Poly			
MW-855-059-Q3	7/21/2014	1550	Water	X							NO13005-1	1	JM
MW-57-059-Q3	7/21/2014	1058	Water	X	X	X		X	X	X	-2	4	JM
MW-57D-059-Q3	7/21/2014	1019	Water	X			X				-3	2	JM
MW-81S-059-Q3	7/21/2014	1309	Water	X			X				-4	2	JM
MW-118S-059-Q3	7/21/2014	1449	Water	X			X				-5	2	JM
MW-119D-059-Q3	7/21/2014	1229	Water	X			X				-6	2	JM
MW-119S-059-Q3	7/21/2014	1144	Water	X			X				-7	2	JM
MW-62A-059-Q3	7/21/2014	1031	Water	X			X				-8	2	JD
MW-62B-059-Q3	7/21/2014	1117	Water	X			X				-9	2	JD
MW-62C-059-Q3	7/21/2014	1400	Water	X			X				-10	2	JD
MW-854-059-Q3	7/21/2014	1605	Water	X							-11	1	SD
MW-110D-059-Q3	7/21/2014	1400	Water	X			X				-12	2	SD
MW-110S-059-Q3	7/21/2014	1329	Water	X			X				-13	2	SD
MW-116D1-059-Q3	7/21/2014	1517	Water	X			X				-14	2	SD
MW-116D2-059-Q3	7/21/2014	1553	Water	X			X				-15	2	SD
MW-116S-059-Q3	7/21/2014	1442	Water	X			X				-16	2	SD
MW-11C-059-Q3	7/21/2014	1238	Water	X			X				-17	2	TH

Signatures Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>	Date/Time 7-21-14 1715 7-21-14 1720 7-21-14 1720 7/21/14 1720 7/21/14 2015	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>2-5°C</i> Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/21/2014 Workorder: N013005
 Rep sample Temp (Deg C): 2.8/2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC Al Cortez 7/22/2014

Reviewed By:

[Signature] 07/28/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013005-002D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.3974-61.3627)*1000000}{100}$$

347 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 350 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/23/2014								TDS/CONDUCTIVITY
Date Finished: 7/24/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46142	100	64.1082	64.1085	3	1	3.00		
LCS-46142	100	63.5094	63.601	916	1	916.00		
N013004-017C	100	64.2757	64.3945	1188	1	1188.00	1748	0.68
N013005-002D	100	61.3627	61.3974	347	1	347.00	585	0.59
N013006-001D	35	63.9944	64.1235	1291	2.8571429	3688.57	4390	0.84
N013006-001D-DUP	35	63.9733	64.1034	1301	2.8571429	3717.14	4390	0.85
N013006-003D	40	63.7997	63.9125	1128	2.5	2820.00	3630	0.78
N013006-004D	40	62.9951	63.1085	1134	2.5	2835.00	3620	0.78
N013006-005D	35	63.7795	63.9005	1210	2.8571429	3457.14	4360	0.79
N013006-006D	35	60.8345	60.9543	1198	2.8571429	3422.86	4280	0.80
N013006-007D	30	60.5341	60.6416	1075	3.3333333	3583.33	4470	0.80
N013006-008D	100	64.2564	64.3451	887	1	887.00	1300	0.68
N013006-009D	100	60.7731	60.899	1259	1	1259.00	1767	0.71
N013008-001C	100	60.6356	60.7747	1391	1	1391.00	1912	0.73

Jmer
7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013005-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.019048 * 1 \\ &= 0.019048\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{6+}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{6+} calculated concentration
DF = dilution factor

For **N013005-003A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{6+}, \mu\text{g/L} &= 2.5734 * 1 \\ &= 2.5734\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{6+}, \mu\text{g/L} = 2.6$$

Money 8/5/2014

Sample ID: **N013005-002D @ pH 7.78**

A. Standardization of Sulfuric Acid (titrant):

$$\text{Normality of acid} = (A)(B)/(53.00)(C)$$

Where:

A, grams weighed for Na₂CO₃ solution (Na₂CO₃ Standardization Solution)
B, mL Na₂CO₃ solution taken for titration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

Na₂CO₃ Standardization Solution, ACS Grade (1.00 ml = 2500ug as CaCO₃):
Dissolve 2.650 grams of Na₂CO₃ in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock NaHCO₃, ACS Grade (1.00 ml = 5000 ug as CaCO₃):
Dissolve 0.8398 grams of NaHCO₃ in distilled water and dilute to 1 liter.

Therefore,

$$\begin{aligned} \text{Normality of Acid} &= (2.65\text{g/L}) (5\text{mL}) / (53.00) (10.65\text{mL}) \\ &= \mathbf{0.02347\ N} \end{aligned}$$

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

$$\text{Total Alkalinity (as CaCO}_3\text{), mg/L} = M_{\text{vol.}} \cdot N \text{ H}_2\text{SO}_4 \cdot \text{DF} \cdot 1000$$

Where:

M_{vol.}, volume titrant used to reach pH 4.5, ml
N, Normality of H₂SO₄
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

$$\begin{aligned} \text{Total Alkalinity (as CaCO}_3\text{), mg/L} &= (6.05) (0.02347\ \text{N}) (1) \cdot 1000 \\ &= 142.02\ \mathbf{mg/L} \end{aligned}$$

Reporting results in two significant figures,

$$= 142\ \mathbf{mg/L}\ \text{as CaCO}_3$$

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

$$\begin{aligned} \text{P alkalinity, mg/L as CaCO}_3 &= P_{\text{vol.}} * N \text{ H}_2\text{SO}_4 * \text{DF} * 1000 \\ &= (0) (0.02347 \text{ N}) (1) * 1000 \\ &= \mathbf{0} \end{aligned}$$

Total Alkalinity

$$\begin{aligned} \text{T alkalinity, mg/L as CaCO}_3 &= M_{\text{vol.}} * N \text{ H}_2\text{SO}_4 * \text{DF} * 1000 \\ &= (6.05 \text{ mL}) (0.02347) (1) * 1000 \\ &= \mathbf{142.02 \text{ mg/L as CaCO}_3} \end{aligned}$$

Where:

- $P_{\text{vol.}}$ - volume titrant used to reach pH 8.3, ml
- $M_{\text{vol.}}$ - volume titrant used to reach pH 4.5, ml
- N - Normality of H_2SO_4
- DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3 , HCO_3 alkalinities as CaCO_3 will be calculated as follows:

Result of Titration	OH Alkalinity as CaCO_3	CO_3 Alkalinity as CaCO_3	HCO_3 Alkalinity as CaCO_3
$P = 0$	0	0	T
$P < \frac{1}{2} T$	0	2P	$T - 2P$
$P = \frac{1}{2} T$	0	2P	0
$P > \frac{1}{2} T$	$2P - T$	$2(T - P)$	0
$P = T$	T	0	0

Therefore,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{142 \text{ mg/L}}$$

Reporting results in two significant figures,

$$\text{OH Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{CO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{0}$$

$$\text{HCO}_3 \text{ Alkalinity as CaCO}_3 = \mathbf{142 \text{ mg/L}}$$

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013005-002C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.107 * 2 \\ &= 2.214 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 2.2$$

 8/5/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Calcium concentration, in mg/L, in the original sample as follows:

$$\text{Calcium, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013005-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Calcium, mg/L} &= 41.86222716 * 1 * (25/25) \\ &= 41.86222716 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Calcium, mg/L} = 42$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013005
Test Method: EPA 6010
Analysis Date: 7/24/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46148

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Dilution test failed for Pb, Mg & Ca.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013004-002B-DT 5X	Calcium	mg/L	76.78004875	FAILED	62.72822737	22.40%	10
N013004-002B-DT 5X	Iron	mg/L	0	NA	0		10
N013004-002B-DT 5X	Magnesium	mg/L	12.61743129	FAILED	11.39521994	10.73%	10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013005
Test Method: EPA 6010
Analysis Date: 7/30/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46148

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series


Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for K. The calculated value is <25X the RL.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013005-002B-DT 5X	Sodium	mg/L	75.88389715	PASS	69.55729315	9.10%	10
N013005-002B-DT 5X	Potassium	mg/L	3.716330688	NA	3.091186555	20.22%	10

Note: NA - Not Applicable

 8/5/2014
for

CLIENT: CH2M HILL
 Work Order: N013005
 Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013004-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94293						
Client ID: ZZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813187						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	75.644	1.0	5.000	62.73	258	80	120				S
Iron	5.157	0.040	5.000	0	103	80	120				
Magnesium	19.318	0.20	5.000	11.40	158	80	120				S

Sample ID: N013005-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94355						
Client ID: ZZZZZZ	Batch ID: 46148	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/30/2014	SeqNo: 1815861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	52.783	2.5	50.00	3.091	99.4	80	120				
Sodium	118.394	2.5	50.00	69.56	97.7	80	120				

MS/MSD are within criteria for all analytes

Murray 8/5/2014

- Qualifiers:**
- B Analyte detected in the associated Method Blank
 - ND Not Detected at the Reporting Limit
 - DO Surrogate Diluted Out
 - E Value above quantitation range
 - R RPD outside accepted recovery limits
 - Calculations are based on raw values
 - H Holding times for preparation or analysis exceeded
 - S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013005-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 1.15077972568894 * 1 * (25/25) \\ &= 1.15077972568894 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 1.2$$

Nancy 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013005
Test Method: EPA 6020
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46129

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr, As & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013005-002B-DT 5X	Chromium	µg/L	2.767393658	NA	2.686957125	2.99%	10
N013005-002B-DT 5X	Arsenic	µg/L	1.078945136	NA	1.150779726	6.24%	10
N013005-002B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013005-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94348						
Client ID: ZZZZZ	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815530						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.594	2.0	20.00	2.687	94.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013005
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013005-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94348						
Client ID: ZZZZZ	Batch ID: 46129	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1815613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.481	0.20	20.00	1.151	96.7	80	120				
Manganese	182.968	1.0	200.0	0	91.5	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

August 05, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013006

RE: PGE Hinkley, 492581.UR.AU.FW

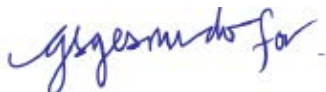
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 21, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013006

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.201 ug/L) and hexavalent chromium (1.385 ug/L) for sample N013006-006 (MW-83S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.181 and 1.459 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 05-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013006
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013006-001A	MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	7/21/2014	8/5/2014
N013006-001B	MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	7/21/2014	8/5/2014
N013006-001C	MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	7/21/2014	8/5/2014
N013006-001D	MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	7/21/2014	8/5/2014
N013006-001E	MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	7/21/2014	8/5/2014
N013006-002A	MW-782-059-Q3	Water	7/21/2014 3:30:00 PM	7/21/2014	8/5/2014
N013006-003A	MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	7/21/2014	8/5/2014
N013006-003B	MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	7/21/2014	8/5/2014
N013006-003C	MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	7/21/2014	8/5/2014
N013006-003D	MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	7/21/2014	8/5/2014
N013006-003E	MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	7/21/2014	8/5/2014
N013006-004A	MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	7/21/2014	8/5/2014
N013006-004B	MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	7/21/2014	8/5/2014
N013006-004C	MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	7/21/2014	8/5/2014
N013006-004D	MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	7/21/2014	8/5/2014
N013006-004E	MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	7/21/2014	8/5/2014
N013006-005A	MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	7/21/2014	8/5/2014
N013006-005B	MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	7/21/2014	8/5/2014
N013006-005C	MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	7/21/2014	8/5/2014
N013006-005D	MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	7/21/2014	8/5/2014
N013006-005E	MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	7/21/2014	8/5/2014
N013006-006A	MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	7/21/2014	8/5/2014
N013006-006B	MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	7/21/2014	8/5/2014
N013006-006C	MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	7/21/2014	8/5/2014
N013006-006D	MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	7/21/2014	8/5/2014
N013006-006E	MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	7/21/2014	8/5/2014
N013006-007A	MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	7/21/2014	8/5/2014
N013006-007B	MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	7/21/2014	8/5/2014
N013006-007C	MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	7/21/2014	8/5/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013006
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013006-007D	MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	7/21/2014	8/5/2014
N013006-007E	MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	7/21/2014	8/5/2014
N013006-008A	MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	7/21/2014	8/5/2014
N013006-008B	MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	7/21/2014	8/5/2014
N013006-008C	MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	7/21/2014	8/5/2014
N013006-008D	MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	7/21/2014	8/5/2014
N013006-008E	MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	7/21/2014	8/5/2014
N013006-009A	MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	7/21/2014	8/5/2014
N013006-009B	MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	7/21/2014	8/5/2014
N013006-009C	MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	7/21/2014	8/5/2014
N013006-009D	MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	7/21/2014	8/5/2014
N013006-009E	MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	7/21/2014	8/5/2014



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-001

Client Sample ID: MW-29-059-Q3
Collection Date: 7/21/2014 3:37:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3700	29	29	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-003

Client Sample ID: MW-63-059-Q3
Collection Date: 7/21/2014 11:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2800	25	25	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-004

Client Sample ID: MW-956-059-Q3
Collection Date: 7/21/2014 12:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2800	25	25	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-005

Client Sample ID: MW-83D-059-Q3
Collection Date: 7/21/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3500	29	29	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-006

Client Sample ID: MW-83S-059-Q3
Collection Date: 7/21/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3400	29	29	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-008

Client Sample ID: MW-88D-059-Q3
Collection Date: 7/21/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	890	10	10	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-009

Client Sample ID: MW-88S-059-Q3
Collection Date: 7/21/2014 12:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/23/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46142	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: PBW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812619						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46142	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: LCSW	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812620						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		916.000	10	1000	0	91.6	80	120			

Sample ID N013006-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/23/2014	RunNo: 94278						
Client ID: ZZZZZ	Batch ID: 46142	TestNo: SM2540C		Analysis Date: 7/23/2014	SeqNo: 1812624						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3717.143	29					3689	0.772	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-001

Client Sample ID: MW-29-059-Q3
Collection Date: 7/21/2014 3:37:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	140	0.057	3.4	pCi/L	5	7/31/2014 01:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-63-059-Q3
Lab Order: N013006	Collection Date: 7/21/2014 11:57:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013006-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	88	0.057	3.4	pCi/L	5	7/31/2014 01:44 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-956-059-Q3
Lab Order: N013006	Collection Date: 7/21/2014 12:07:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013006-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	89	0.057	3.4	pCi/L	5	7/31/2014 01:49 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-005

Client Sample ID: MW-83D-059-Q3
Collection Date: 7/21/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	93	0.057	3.4	pCi/L	5	7/31/2014 01:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-006

Client Sample ID: MW-83S-059-Q3
Collection Date: 7/21/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	74	0.057	3.4	pCi/L	5	7/31/2014 02:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-007

Client Sample ID: MW-170S-059-Q3
Collection Date: 7/21/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	86	0.057	3.4	pCi/L	5	7/31/2014 02:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-008

Client Sample ID: MW-88D-059-Q3
Collection Date: 7/21/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	20	0.057	3.4	pCi/L	5	7/31/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-009

Client Sample ID: MW-88S-059-Q3
Collection Date: 7/21/2014 12:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147				PrepDate: 7/24/2014		Analyst: CEI
Uranium	41	0.057	3.4		pCi/L	5	7/31/2014 02:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46147	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: PBW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816477
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46147	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: LCSW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816478
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	6.805	0.67	6.700	0	102 85 115

Sample ID N013006-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816484
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	132.682	3.4	6.700	135.6	-43.9 75 125 S

Sample ID N013006-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816485
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	133.137	3.4	6.700	135.6	-37.2 75 125 132.7 0.342 20 S

Sample ID N013015-002B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816499
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	44.289	3.4	6.700	37.51	101 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-001

Client Sample ID: MW-29-059-Q3
Collection Date: 7/21/2014 3:37:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/22/2014 05:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/29/2014 11:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-002

Client Sample ID: MW-782-059-Q3
Collection Date: 7/21/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 03:24 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/22/2014 05:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-003

Client Sample ID: MW-63-059-Q3
Collection Date: 7/21/2014 11:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/22/2014 06:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/29/2014 11:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-004

Client Sample ID: MW-956-059-Q3
Collection Date: 7/21/2014 12:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	7/22/2014 06:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	7/30/2014 12:05 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-005

Client Sample ID: MW-83D-059-Q3
Collection Date: 7/21/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	0.74	0.016	0.20		µg/L	1	7/22/2014 07:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	7/30/2014 12:21 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-006

Client Sample ID: MW-83S-059-Q3
Collection Date: 7/21/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/22/2014 09:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	7/30/2014 12:27 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-007

Client Sample ID: MW-170S-059-Q3
Collection Date: 7/21/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/22/2014 07:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/30/2014 12:32 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-008

Client Sample ID: MW-88D-059-Q3
Collection Date: 7/21/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	0.20	0.016	0.20		µg/L	1	7/22/2014 08:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/30/2014 12:38 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-009

Client Sample ID: MW-88S-059-Q3
Collection Date: 7/21/2014 12:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140722A	QC Batch: R94254				PrepDate		Analyst: QBM
Hexavalent Chromium	5.5	0.016	0.20		µg/L	1	7/22/2014 08:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate	7/24/2014	Analyst: CEI
Chromium	6.1	0.030	1.0		µg/L	1	7/30/2014 12:43 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94368	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: PBW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816306
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94368	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: LCSW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816307
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.196	0.060	0.2000	0	98.0 90 110
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Sample ID N013005-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816309
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.018	0.060			0.01905 0 20
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Sample ID N013005-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816310
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.215	0.060	0.2000	0.01905	97.8 90 110
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Sample ID N013005-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816312
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.213	0.060	0.2000	0.01606	98.2 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110
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Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110
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Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110
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Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110
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Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110				

Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110				

Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013006-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.183	0.20	1.000	1.143	104	90	110				

Sample ID N013006-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811782						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				

Sample ID N013006-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811786						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.130	0.20	1.000	1.066	106	90	110				

Sample ID N013006-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811788						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.109	0.20	1.000	1.108	100	90	110				

Sample ID N013006-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811790						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.807	0.20	1.000	0.7441	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013006-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.429	0.20	1.000	1.386	104	90	110				

Sample ID N013006-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811793						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.039	0.20	1.000	1.995	104	90	110				

Sample ID N013006-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811797						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.304	0.20	1.000	0.2044	110	90	110				

Sample ID N013006-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94254						
Client ID: ZZZZZZ	Batch ID: R94254	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1811799						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.832	0.20	5.000	5.494	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46144	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348						
Client ID: PBW	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816416						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46144	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348						
Client ID: LCSW	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816417						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.698 1.0 10.00 0 107 85 115

Sample ID N013006-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.376 1.0 10.00 1.520 98.6 75 125

Sample ID N013006-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348						
Client ID: ZZZZZZ	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.857 1.0 10.00 1.520 83.4 75 125 11.38 14.3 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-001

Client Sample ID: MW-29-059-Q3
Collection Date: 7/21/2014 3:37:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722A** QC Batch: **R94269** PrepDate: Analyst: **PS**
Nitrate as N 10 0.026 0.25 mg/L 5 7/22/2014 03:09 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-63-059-Q3
Lab Order: N013006	Collection Date: 7/21/2014 11:57:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013006-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269			PrepDate			Analyst: PS
Nitrate as N	24	0.10	1.0	mg/L	20		7/22/2014 03:22 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-004

Client Sample ID: MW-956-059-Q3
Collection Date: 7/21/2014 12:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722A** QC Batch: **R94269** PrepDate Analyst: **PS**
Nitrate as N 24 0.10 1.0 mg/L 20 7/22/2014 05:41 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-005

Client Sample ID: MW-83D-059-Q3
Collection Date: 7/21/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722A	QC Batch: R94269				PrepDate		Analyst: PS
Nitrate as N	53	0.26	2.5		mg/L	50	7/22/2014 03:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-006

Client Sample ID: MW-83S-059-Q3
Collection Date: 7/21/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722B** QC Batch: **R94270** PrepDate: Analyst: **PS**
Nitrate as N 40 0.26 2.5 mg/L 50 7/22/2014 06:28 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-007

Client Sample ID: MW-170S-059-Q3
Collection Date: 7/21/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722B** QC Batch: **R94270** PrepDate Analyst: **PS**
Nitrate as N 68 0.26 2.5 mg/L 50 7/22/2014 06:41 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013006-008

Client Sample ID: MW-88D-059-Q3
Collection Date: 7/21/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722B** QC Batch: **R94270** PrepDate: Analyst: **PS**
Nitrate as N 5.7 0.026 0.25 mg/L 5 7/22/2014 06:53 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** MW-88S-059-Q3
Lab Order: N013006 **Collection Date:** 7/21/2014 12:14:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N013006-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140722B** QC Batch: **R94270** PrepDate Analyst: **PS**
Nitrate as N 15 0.051 0.50 mg/L 10 7/22/2014 08:34 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94269_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94269			
Client ID:	PBW	Batch ID:	R94269	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812341			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		ND		0.050										
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Sample ID	LCS-R94269_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94269			
Client ID:	LCSW	Batch ID:	R94269	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812342			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		0.938		0.050	1.000	0		93.8	90	110				
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Sample ID	N013004-011C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94269			
Client ID:	ZZZZZ	Batch ID:	R94269	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812357			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		ND		0.050							0	0	20	
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Sample ID	N013004-007C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94269			
Client ID:	ZZZZZ	Batch ID:	R94269	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812365			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		4.300		0.25							4.110	4.52	20	
--------------	--	-------	--	------	--	--	--	--	--	--	-------	------	----	--

Sample ID	N013004-007C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94269			
Client ID:	ZZZZZ	Batch ID:	R94269	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812366			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N		8.905		0.25	5.000	4.110		95.9	80	120				
--------------	--	-------	--	------	-------	-------	--	------	----	-----	--	--	--	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013004-007C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	9.120	0.25	5.000	4.110	100	80	120	8.905	2.39	20	

Sample ID N013004-011C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94269						
Client ID: ZZZZZZ	Batch ID: R94269	TestNo: EPA 300.0		Analysis Date: 7/22/2014	SeqNo: 1812368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.906	0.050	1.000	0	90.6	80	120				

Qualifiers:




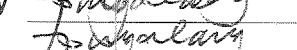
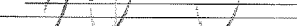

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.AU.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	2x1000 ml Poly	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	Preservatives: (NH4)2 SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	HNO3			
Filtered:				Field	Field	Field	Field	NA	NA			
Holding Time (days):				28	180	180	2	7	180			
				Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	Gross Alpha/Beta (SM710B/E900)			
MW-29-059-Q3	7/21/2014	1537	Water	X	X	X	X	X	X	NO13006-1 -2 -3 -4 -5 -6 -7 -8 -9 ↓	6	JM
MW-782-059-Q3	7/21/2014	1530	Water	X							1	JD
MW-63-059-Q3	7/21/2014	1157	Water	X	X	X	X	X	X		6	JD
MW-956-059-Q3	7/21/2014	1207	Water	X	X	X	X	X	X		6	JD
MW-83D-059-Q3	7/21/2014	1519	Water	X	X	X	X	X	X		6	JD
MW-83S-059-Q3	7/21/2014	1439	Water	X	X	X	X	X	X		6	JD
MW-170S-059-Q3	7/21/2014	1304	Water	X	X	X	X	X	X		6	JD
MW-88D-059-Q3	7/21/2014	1030	Water	X	X	X	X	X	X		6	SD
MW-88S-059-Q3	7/21/2014	1214	Water	X	X	X	X	X	X		6	SD
TOTAL NUMBER OF CONTAINERS										49		

Signatures Approved by:  Sampled by:  Relinquished by:  Received by:  Relinquished by:  Received by: 	Date/Time 7/21/14 1537 7/21/14 @ 1700 7/21/14 @ 1700 7/21/14 1700 7/21/14 2:05	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3.5°C / 3.5°C Airbill No: 1A#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
--	--	--	--------------	---

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/21/2014 Workorder: N013006
 Rep sample Temp (Deg C): 3.5/3.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Sample ID MW-170S-059-Q3 was received at pH 5. Acid added to pH <2.

Checklist Completed B AC Cortez 7/22/2014

Reviewed By:  07/28/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013006-001E / MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	32OZP	1		
N013006-003E / MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	32OZP	1		
N013006-004E / MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	32OZP	1		
N013006-005E / MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	32OZP	1		
N013006-006E / MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	32OZP	1		
N013006-007E / MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	32OZP	1		
N013006-008E / MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	32OZP	1		
N013006-009E / MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	32OZP	1		

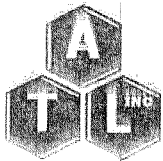
General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899
7706 7451 0465
7706 7451 0260

Please use PO#:N13006A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <u>ACortes</u> 7/23/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.asset-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

25-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 900.0	
N013006-006E / MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	32OZP	1	

FedEx#: 7706 9479 8585
7706 9479 8380
7706 9479 8390

General Comments:

Please email sample receipt acknowledgement to the PM.

Please use PO# N13006A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
by: Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Amanda Coats</i>	Date/Time: 7/25/14 1700	Received by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B) \cdot 1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013006-001D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.1235 - 64.9944) \cdot 1000000}{35}$$

3688.57 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 3700.00 \text{ mg/L}$$


7/29/2014

 8/5/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/23/2014								TDS/CONDUCTIVITY
Date Finished: 7/24/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46142	100	64.1082	64.1085	3	1	3.00		
LCS-46142	100	63.5094	63.601	916	1	916.00		
N013004-017C	100	64.2757	64.3945	1188	1	1188.00	1748	0.68
N013005-002D	100	61.3627	61.3974	347	1	347.00	585	0.59
N013006-001D	35	63.9944	64.1235	1291	2.8571429	3688.57	4390	0.84
N013006-001D-DUP	35	63.9733	64.1034	1301	2.8571429	3717.14	4390	0.85
N013006-003D	40	63.7997	63.9125	1128	2.5	2820.00	3630	0.78
N013006-004D	40	62.9951	63.1085	1134	2.5	2835.00	3620	0.78
N013006-005D	35	63.7795	63.9005	1210	2.8571429	3457.14	4360	0.79
N013006-006D	35	60.8345	60.9543	1198	2.8571429	3422.86	4280	0.80
N013006-007D	30	60.5341	60.6416	1075	3.33333333	3583.33	4470	0.80
N013006-008D	100	64.2564	64.3451	887	1	887.00	1300	0.68
N013006-009D	100	60.7731	60.899	1259	1	1259.00	1767	0.71
N013008-001C	100	60.6356	60.7747	1391	1	1391.00	1912	0.73

Jmer
7/29/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N013006-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 40.485458013 * 5 * (25/25) * 0.67 \\ &= 135.62628434355 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = \mathbf{140}$$

 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013006
Test Method: EPA 200.8
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46147

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013006-001B-DT 25X	Uranium	pCi/L	146.9270803	PASS	135.6262843	8.33%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013006-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8	Analysis Date: 7/31/2014	SeqNo: 1816483							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	179.666	3.4	33.50	135.6	131	80	120				S

DT @ 25x is within criteria

Money 8/5/2014

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013006-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.014335 * 1 \\ &= 0.014335\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/5/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013006-009A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 5.4944 * 1 \\ &= 5.4944 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 5.5$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013006-001C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 2.071 * 5 \\ &= 10.355 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 10$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013006-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.5197193019 * 1 * (25/25) \\ &= 1.5197193019 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.5$$

Nancy 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013006
Test Method: EPA 6020
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46144

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013006-001B-DT 5X	Chromium	µg/L	1.524109882	NA	1.519719302	0.29%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013006
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013006-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94348						
Client ID: ZZZZZ	Batch ID: 46144	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1816420						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.347	2.0	20.00	1.520	104	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 29, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013006
Pace Project No.: 30126010

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report reissued 8/29/14 to report the re-analyses results for Sample 005.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE SUMMARY

Project: N013006

Pace Project No.: 30126010

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126010001	N013006-001E/MW-29-059-Q3	Water	07/21/14 15:37	07/29/14 09:00
30126010002	N013006-003E/MW-63-059-Q3	Water	07/21/14 11:57	07/29/14 09:00
30126010003	N013006-004E/MW-956-059-Q3	Water	07/21/14 12:07	07/29/14 09:00
30126010004	N013006-005E/ MW-83D-059-Q3	Water	07/21/14 15:19	07/29/14 09:00
30126010005	N013006-006E/ MW-83S-059-Q3	Water	07/21/14 14:39	07/29/14 09:00
30126010006	N013006-007E/MW-170S-059-Q3	Water	07/21/14 13:04	07/29/14 09:00
30126010007	N013006-008E/MW-88D-059-Q3	Water	07/21/14 10:30	07/29/14 09:00
30126010008	N013006-009E/MW-88S-059-Q3	Water	07/21/14 12:14	07/29/14 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N013006
Pace Project No.: 30126010

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126010001	N013006-001E/MW-29-059-Q3	EPA 900.0	FCC	2
30126010002	N013006-003E/MW-63-059-Q3	EPA 900.0	FCC	2
30126010003	N013006-004E/MW-956-059-Q3	EPA 900.0	FCC	2
30126010004	N013006-005E/ MW-83D-059-Q3	EPA 900.0	FCC	2
30126010005	N013006-006E/ MW-83S-059-Q3	EPA 900.0	FCC	2
30126010006	N013006-007E/MW-170S-059-Q3	EPA 900.0	FCC	2
30126010007	N013006-008E/MW-88D-059-Q3	EPA 900.0	FCC	2
30126010008	N013006-009E/MW-88S-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013006
Pace Project No.: 30126010

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 29, 2014

General Information:

8 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Sample Comments:

Client requested a data review of results on sample 30126010005 based on results of sample 30126326001. Both samples are the same, collected from the same location on the same day. Both original sample planchets from their respective analytical batches were located and recounted. Results from the recount have been reported and the report re-issued.

- N013006-006E/ MW-83S-059-Q3 (Lab ID: 30126010005)

This data package has been reviewed for quality and completeness and is approved for release.

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QUALITY CONTROL - RADIOCHEMISTRY

Project: N013006
Pace Project No.: 30126010

QC Batch:	RADC/20728	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30126010001, 30126010002, 30126010003, 30126010004, 30126010005, 30126010006, 30126010007, 30126010008		

METHOD BLANK:	766863	Matrix:	Water
Associated Lab Samples:	30126010001, 30126010002, 30126010003, 30126010004, 30126010005, 30126010006, 30126010007, 30126010008		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.279 ± 0.594 (1.39) C:NA T:NA	pCi/L	08/01/14 06:35	
Gross Beta	-0.267 ± 0.756 (1.94) C:NA T:NA	pCi/L	08/01/14 06:35	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: SIGNED

30126010 23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N013006-001E / MW-29-059-Q3	Water	7/21/2014 3:37:00 PM	32OZP	1		001
N013006-003E / MW-63-059-Q3	Water	7/21/2014 11:57:00 AM	32OZP	1		002
N013006-004E / MW-956-059-Q3	Water	7/21/2014 12:07:00 PM	32OZP	1		003
N013006-005E / MW-83D-059-Q3	Water	7/21/2014 3:19:00 PM	32OZP	1		004
N013006-006E / MW-83S-059-Q3	Water	7/21/2014 2:39:00 PM	32OZP	1		005
N013006-007E / MW-170S-059-Q3	Water	7/21/2014 1:04:00 PM	32OZP	1		006
N013006-008E / MW-88D-059-Q3	Water	7/21/2014 10:30:00 AM	32OZP	1		007
N013006-009E / MW-88S-059-Q3	Water	7/21/2014 12:14:00 PM	32OZP	1		008

General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899 Please use PO#:N13006A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:
 7706 7451 0465 Normal TAT.
 7706 7451 0260

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by:	Date/Time	Received by:	Date/Time
<i>Alorton</i>	7/23/2014 1500	<i>Amala</i>	7-29-14 0900
Relinquished by:		Received by:	



Sample Condition Upon Receipt

ARM

Client Name: ATL

Project # 30126010

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770674510899

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None Other _____

Thermometer Used N/A Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: _____ °C Final Temp.: _____ °C

Date and Initials of person examining contents: AML 7-29-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>COC says AML 7-29-14</u>
-Includes date/time/ID/Analysis Matrix:	<u>WT AML 7-29-14</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>AML</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):	_____	

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 7/30/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: _____
 Client Name: ATC

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem NaIgene (125 / 250 / 500 / 1L)	Radchem NaIgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other	
001	WT																								
004	WT																								
005	WT																								
006	WT																								
008	WT																								

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 8/4/2014
Worklist: 20728
Matrix: Water
MB Sample ID: 766863
Method: EPA 900.0
SOP: PGR-R-001
Flag: 766863



Method Blank Assessment			
Analyte	Activity	MDC	Assessment
Gross Alpha	0.2790	1.3920	
Gross Beta	-0.2670	1.9350	
		0.4100	
		0.65100	

Laboratory Control Sample Assessment			
Analyte:	LCS	LCS/D	LCS/D
Gross Alpha	8/1/14 6:35	8/1/14 6:35	8/1/14 6:35
Count Date:	13-048GA	13-047GB	13-047GB
Spike I.D.:	64.598	84.566	84.566
Spike Concentration (pCi/L):	0.050	0.050	0.050
Volume Used (mL):	0.202	0.199	0.202
Aliquot Volume (L, g, F):	16.200	21.207	20.961
Target Conc. (pCi/L, g, F):	0.572	1.289	1.274
1.96 Sigma Uncertainty (Calculated):	13.831	20.060	24.283
1.96 Sigma Unc:	3.687	4.274	5.007
% Recovery:	92.83%	94.59%	115.85%
Assessment:	Pass	Pass	Pass
Upper % Recovery Limits:	121.00%	130.00%	130.00%
Lower % Recovery Limits:	69.00%	79.00%	79.00%

Duplicate Sample Assessment			
LCS/LCSD Y or N?	Y	Y	
Gross Alpha	8/1/14 6:35	8/1/14 6:35	
Count Date:	13-048GA	13-047GB	
Spike I.D.:	64.598	84.566	
Spike Concentration (pCi/L):	0.050	0.050	
Volume Used (mL):	0.202	0.199	
Aliquot Volume (L, g, F):	16.200	21.207	
Target Conc. (pCi/L, g, F):	0.572	1.289	
1.96 Sigma Uncertainty (Calculated):	13.831	20.060	
1.96 Sigma Unc:	3.687	4.274	
% Recovery:	92.83%	94.59%	
Assessment:	Pass	Pass	
Upper % Recovery Limits:	121.00%	130.00%	
Lower % Recovery Limits:	69.00%	79.00%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Sample Matrix Spike Control Assessment			
Analyte:	Sample I.D.	Gross Alpha	Gross Beta
Gross Alpha	30126086001MS	30126086001	30126086001
Count Date:	13-048GA	13-047GB	13-047GB
Spike I.D.:	64.598	84.566	84.590
Spike Concentration (pCi/L):	0.050	0.050	0.10
Volume Used (mL):	0.202	0.199	0.2003
Aliquot Volume (L, g, F):	16.200	21.207	42.238
Target Conc. (pCi/L, g, F):	0.572	1.289	
MS Target Conc. (pCi/L, g, F):	0.572	1.289	
MSD Aliquot (L, g, F):	13.831	20.060	
MSD Target Conc. (pCi/L, g, F):	3.521	4.274	
MSD Target Conc. (pCi/L, g, F):	3.521	4.274	
MS Spike uncertainty (calculated):	92.83%	94.59%	
MSD Spike uncertainty (calculated):	92.83%	94.59%	
Sample Result:	Pass	Pass	
Sample 1.96 Sigma Unc:	121.00%	130.00%	
Sample Matrix Spike Result:	121.00%	130.00%	
Sample MS 1.96 Sigma Unc:	69.00%	79.00%	
Sample Matrix Spike Duplicate Result:	69.00%	79.00%	
Sample MSD 1.96 Sigma Unc:	114.97%	114.97%	
MS % Recovery:	78.73%	78.73%	
MSD % Recovery:	78.73%	78.73%	
MS Assessment:	Pass	Pass	
MSD Assessment:	Pass	Pass	
MS/MSD Upper % Recovery Limits:	121.00%	121.00%	
MS/MSD Lower % Recovery Limits:	69.00%	69.00%	

Handwritten signature/initials

July 28, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013007

RE: PGE Hinkley, 492584.UR.DM.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 21, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N013007

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.DM.FW
Lab Order: N013007
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013007-001A	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	7/28/2014
N013007-001B	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	7/28/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 28-Jul-14

CLIENT: CH2M HILL
Lab Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW
Lab ID: N013007-001

Client Sample ID: 23-25-059-Q3
Collection Date: 7/21/2014 10:36:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140722A	QC Batch: R94266				PrepDate		Analyst: QBM
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/22/2014 11:33 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140723B	QC Batch: 46127				PrepDate	7/23/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/23/2014 08:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013007
 Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	MB-R94266	SampType:	MBLK	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94266			
Client ID:	PBW	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812252			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium		ND		0.20										
---------------------	--	----	--	------	--	--	--	--	--	--	--	--	--	--

Sample ID	LCS-R94266	SampType:	LCS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94266			
Client ID:	LCSW	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812253			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium		5.035		0.20	5.000	0		101	90	110				
---------------------	--	-------	--	------	-------	---	--	-----	----	-----	--	--	--	--

Sample ID	N013007-001ADUP	SampType:	DUP	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94266			
Client ID:	ZZZZZ	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812255			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium		2.753		0.20							2.732	0.740	20	
---------------------	--	-------	--	------	--	--	--	--	--	--	-------	-------	----	--

Sample ID	N013007-001A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94266			
Client ID:	ZZZZZ	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812256			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium		3.664		0.20	1.000	2.732		93.2	90	110				
---------------------	--	-------	--	------	-------	-------	--	------	----	-----	--	--	--	--

Sample ID	N013007-001A-MSD	SampType:	MSD	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:		RunNo:	94266			
Client ID:	ZZZZZ	Batch ID:	R94266	TestNo:	EPA 218.6			Analysis Date:	7/22/2014	SeqNo:	1812257			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium		3.715		0.20	1.000	2.732		98.2	90	110	3.664	1.37	20	
---------------------	--	-------	--	------	-------	-------	--	------	----	-----	-------	------	----	--

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012993-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812259						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID N012993-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812261						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.539	0.20	1.000	0.5306	101	90	110				

Sample ID N012993-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0.03490	99.8	90	110				

Sample ID N012993-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N012993-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.303	0.20	5.000	5.252	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N012993-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.457	0.20	1.000	0.4355	102	90	110				

Sample ID N013005-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.009	0.20	1.000	0	101	90	110				

Sample ID N013005-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812287						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.301	0.20	1.000	2.300	100	90	110				

Sample ID N013005-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.559	0.20	1.000	2.573	98.5	90	110				

Sample ID N013005-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.353	0.20	1.000	1.325	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94266						
Client ID: ZZZZZZ	Batch ID: R94266	TestNo: EPA 218.6		Analysis Date: 7/22/2014	SeqNo: 1812293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.230	0.20	1.000	2.238	99.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46127	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: PBW	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812542						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46127	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: LCSW	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.555 1.0 10.00 0 95.6 85 115

Sample ID N013007-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: ZZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812547						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.062 1.0 10.00 2.924 91.4 75 125

Sample ID N013007-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/23/2014	RunNo: 94274						
Client ID: ZZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812548						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.179 1.0 10.00 2.924 92.5 75 125 12.06 0.962 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly					
Location Hinkley				Preservatives:	(NH ₄) ₂ SO ₄ , NH ₄ OH, 4°C	HNO ₃ , 4°C					
Project Number 492584.UR.DM.FW					Filtered:	Field			Field		
Project Manager Jennifer Low					Holding Time (days):	28			180		
Sample Manager Jim Hanvey				Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr						
Cell Number (404) 229-2181											
Fax Number (510) 622-9136											
Task Order 59											
Project 2014-DOM-059-Q3							Number of Containers	COMMENTS			
Turnaround Time 5 Days											
Shipping Date:											
COC Number:											
SAMPLE ID	DATE	TIME	Matrix								
23-25-059-Q3	7/21/14	1036	GW	X	X					2	BROWN
								TOTAL NUMBER OF CONTAINERS	2		

Approved by	<i>[Signature]</i>	Signatures	Date/Time	7/21/14 1645	Shipping Details	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Sampled by	<i>[Signature]</i>		7-21-14	1650	Method of Shipment:		
Relinquished by	<i>[Signature]</i>		7-21-14	1650	On Ice: <i>(yes)</i> / no <i>2-90c</i>		
Received by	<i>[Signature]</i>		7/21/14	1650	Airbill No: <i>1842</i>		
Relinquished by	<i>[Signature]</i>		7/21/14	2:00	Lab Name: Advanced Technology Laboratories		
Received by	<i>[Signature]</i>		7/21/14	2:00	Lab Phone: (702) 307-2659		

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/21/2014 Workorder: N013007
 Rep sample Temp (Deg C): 2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/22/2014

Reviewed By:

 07/28/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013007-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 2.7322 * 1 \\ &= 2.7322 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.7$$

 7/28/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013007-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.9239344783 * 1 * (25/25) \\ &= 2.9239344783 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.9$$

 7/28/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013007
Test Method: EPA 6020
Analysis Date: 7/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46127

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013007-001B-DT 5X	Chromium	µg/L	3.080626461	NA	2.923934478	5.36%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013007
Project: PGE Hinkley, 492584.UR.DM.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013007-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94274						
Client ID: ZZZZZ	Batch ID: 46127	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/23/2014	SeqNo: 1812546						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.867	2.0	20.00	2.924	94.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 05, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013008

RE: PGE Hinkley, 492584.UR.AU

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 21, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N013008

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492584.UR.AU
Lab Order: N013008
Contract No: 2014-DOM-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013008-001A	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	8/5/2014
N013008-001B	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	8/5/2014
N013008-001C	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	8/5/2014
N013008-001D	23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	7/21/2014	8/5/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 23-25-059-Q3
Lab Order: N013008	Collection Date: 7/21/2014 10:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N013008-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140723C	QC Batch: 46142			PrepDate	7/23/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1400	10	10	mg/L	1	7/23/2014 01:39 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013008
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID	SampType	TestCode	Units	Prep Date	RunNo	Client ID	Batch ID	TestNo	Analysis Date	SeqNo	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
MB-46142	MBLK	160.1_2540C	mg/L	7/23/2014	94278	PBW	46142	SM2540C	7/23/2014	1812619	Total Dissolved Solids (Residue, Filtera	ND	10											
LCS-46142	LCS	160.1_2540C	mg/L	7/23/2014	94278	LCSW	46142	SM2540C	7/23/2014	1812620	Total Dissolved Solids (Residue, Filtera	916.000	10	1000	0	91.6	80	120						
N013006-001D-DUP	DUP	160.1_2540C	mg/L	7/23/2014	94278	ZZZZZ	46142	SM2540C	7/23/2014	1812624	Total Dissolved Solids (Residue, Filtera	3717.143	29						3689	0.772		5		

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 23-25-059-Q3
Lab Order: N013008	Collection Date: 7/21/2014 10:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N013008-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	48	0.023	1.3	pCi/L	2	7/31/2014 02:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013008
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46147	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369						
Client ID: PBW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	ND	0.67									
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Sample ID LCS-46147	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369						
Client ID: LCSW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816478						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	6.805	0.67	6.700	0	102	85	115				
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Sample ID N013006-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	132.682	3.4	6.700	135.6	-43.9	75	125				S
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Sample ID N013006-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	133.137	3.4	6.700	135.6	-37.2	75	125	132.7	0.342	20	S
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Sample ID N013015-002B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816499						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Uranium	44.289	3.4	6.700	37.51	101	75	125				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: 23-25-059-Q3
Lab Order: N013008	Collection Date: 7/21/2014 10:36:00 AM
Project: PGE Hinkley, 492584.UR.AU	Matrix: GROUNDWATER
Lab ID: N013008-001	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140722B	QC Batch: R94270			PrepDate		Analyst: PS
Nitrate as N	14	0.051	0.50	mg/L	10	7/22/2014 08:47 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013008
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94270_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	PBW	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812400			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID	LCS-R94270_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	LCSW	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812401			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.962 0.050 1.000 0 96.2 90 110

Sample ID	N013006-006C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	ZZZZZ	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812409			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 38.850 2.5 39.70 2.16 20

Sample ID	N013006-006C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	ZZZZZ	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812410			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 86.150 2.5 50.00 39.70 92.9 80 120

Sample ID	N013006-006C-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94270			
Client ID:	ZZZZZ	Batch ID:	R94270	TestNo:	EPA 300.0			Analysis Date:	7/22/2014	SeqNo:	1812411			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 86.600 2.5 50.00 39.70 93.8 80 120 86.15 0.521 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492584.UR.AU Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-DOM-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:	Container:	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	2x1000 ml Poly			
	Preservatives:	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C	HNO3			
	Filtered:	Field	Field	Field	Field	NA	NA	NA			
	Holding Time (days):	180	180	180	2	7	28	180			
		Metals Dissolved (6010BD)s) FF Fe	Metals Dissolved (6020AFF) FF As, Mn	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	TOC (E5310)	Gross Alpha/Beta (SM7110B/E900)			
SAMPLE ID	DATE	TIME	Matrix							Number of Containers	COMMENTS

23-25-059-Q3	7/21/14	1036	GW			X	X	X	X		NO13008-1	5	BROWN

TOTAL NUMBER OF CONTAINERS **5**

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/21/14 1645 7-21-14 1650 7-21-14 1650 7/21/14 1630 7/21/14 205 7/21/14 205	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no <i>2-gal</i> Airbill No: <i>IR#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
---	---	--	-------	--

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/21/2014 Workorder: N013008
 Rep sample Temp (Deg C): 2.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/22/2014

Reviewed By:

[Signature] 07/28/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013008-001D / 23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899
7706 7451 0465
7706 7451 0260

Please use PO#:N13008A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <u>Al Cortes</u> 7/23/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____		Received by: _____	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013008-001C, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(60.7747-60.6356)*1000000}{100}$$

1391 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1400 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/23/2014								TDS/CONDUCTIVITY
Date Finished: 7/24/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46142	100	64.1082	64.1085	3	1	3.00		
LCS-46142	100	63.5094	63.601	916	1	916.00		
N013004-017C	100	64.2757	64.3945	1188	1	1188.00	1748	0.68
N013005-002D	100	61.3627	61.3974	347	1	347.00	585	0.59
N013006-001D	35	63.9944	64.1235	1291	2.8571429	3688.57	4390	0.84
N013006-001D-DUP	35	63.9733	64.1034	1301	2.8571429	3717.14	4390	0.85
N013006-003D	40	63.7997	63.9125	1128	2.5	2820.00	3630	0.78
N013006-004D	40	62.9951	63.1085	1134	2.5	2835.00	3620	0.78
N013006-005D	35	63.7795	63.9005	1210	2.8571429	3457.14	4360	0.79
N013006-006D	35	60.8345	60.9543	1198	2.8571429	3422.86	4280	0.80
N013006-007D	30	60.5341	60.6416	1075	3.3333333	3583.33	4470	0.80
N013006-008D	100	64.2564	64.3451	887	1	887.00	1300	0.68
N013006-009D	100	60.7731	60.899	1259	1	1259.00	1767	0.71
N013008-001C	100	60.6356	60.7747	1391	1	1391.00	1912	0.73

Jmer
7/29/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N013008-001A**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 35.774648928 * 2 * (25/25) * 0.67 \\ &= 47.93802956352 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 48$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013008
Test Method: EPA 200.8
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46147

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013006-001B-DT 25X	Uranium	pCi/L	146.9270803	PASS	135.6262843	8.33%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013008
Project: PGE Hinkley, 492584.UR.AU

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013006-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8	Analysis Date: 7/31/2014	SeqNo: 1816483							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	179.666	3.4	33.50	135.6	131	80	120				S

DT @25x is within criteria

Nancy 8/5/2014

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013008-001B** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.352 * 10 \\ &= 13.52 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 14$$

Nancy 8/5/2014

August 13, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013008
Pace Project No.: 30126009

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N013008
Pace Project No.: 30126009

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126009001	N013008-001D/23-25-059-Q3	Water	07/21/14 10:36	07/29/14 09:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N013008
Pace Project No.: 30126009

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126009001	N013008-001D/23-25-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013008
Pace Project No.: 30126009

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 13, 2014

General Information:

1 sample was analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N013008
Pace Project No.: 30126009

QC Batch:	RADC/20728	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30126009001		

METHOD BLANK:	766863	Matrix:	Water
Associated Lab Samples:	30126009001		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.279 ± 0.594 (1.39) C:NA T:NA	pCi/L	08/01/14 06:35	
Gross Beta	-0.267 ± 0.756 (1.94) C:NA T:NA	pCi/L	08/01/14 06:35	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.assetlabs.com
TEL: 7023072659 FAX: 7023072691



QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

30126009

23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests
N013008-001D / 23-25-059-Q3	Groundwater	7/21/2014 10:36:00 AM	32OZP	1	00

General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899 Please use PO#:N13008A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
7706 7451 0465 by:Normal TAT.
7706 7451 0260

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by:	Date/Time	Received by:	Date/Time
<i>Al Cortes</i>	7/23/2014 1500	<i>Shawn Duffy</i>	7-29-14 0900
Relinquished by:		Received by:	



Sample Condition Upon Receipt

APM

Client Name: ATL

Project # 30126009

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770674510899

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other _____

Thermometer Used N/A Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: - °C Final Temp: - °C

Date and Initials of person examining contents: AMC 7-27-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>WT</u>	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed <u>AMC</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature]

Date: 7/30/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 8/14/2014
Worklist: 20728
Matrix: Water
EPA 900.0
PGH-R-001
766863



Method Blank Assessment				
Analyte	Activity	1.96 Sig Unc.	MDC	Assessment
Gross Alpha	0.2790	0.5940	1.3920	0.41100
Gross Beta	-0.2670	0.7560	1.9350	0.66100

Laboratory Control Sample Assessment						
LCS		LCSD		LCS		LCSD
Analyte: Gross Alpha		Gross Beta		LCS		LCSD
Count Date:	8/11/14 6:35	8/11/14 6:35	8/11/14 6:35	8/11/14 6:35	8/11/14 6:35	
Spike I.D.:	13-048GA	13-047GB	13-047GB	13-047GB	13-047GB	
Spike Concentration (pCi/L):	64.598	84.566	84.566	84.566	84.566	
Volume Used (mL):	0.050	0.050	0.050	0.050	0.050	
Aliquot Volume (L, g, F):	0.199	0.199	0.199	0.202	0.202	
Target Conc. (pCi/L, g, F):	16.200	16.012	21.207	20.961	20.961	
1.96 Sigma Uncertainty (Calculated):	0.572	0.565	1.289	1.274	1.274	
Result (pCi/L, g, F):	15.039	13.831	20.060	24.283	24.283	
1.96 Sigma Unc:	3.687	3.521	4.274	5.007	5.007	
% Recovery:	92.83%	86.38%	94.59%	115.85%	115.85%	
Assessment:	Pass	Pass	Pass	Pass	Pass	
Upper % Recovery Limits:	121.00%	121.00%	130.00%	130.00%	130.00%	
Lower % Recovery Limits:	69.00%	69.00%	79.00%	79.00%	79.00%	

Duplicate Sample Assessment				
LCS/LCSD Y or N?		Y		
Analyte:	Gross Alpha	Gross Beta	LCS	LCSD
Sample I.D.:	LCS20728	LCS20728	LCS	LCSD
Duplicate Sample I.D.:	LCS20728	LCS20728	LCS	LCSD
Sample Result (pCi/L, g, F):	15.0390	20.0600	94.59%	115.85%
1.96 Sigma Unc:	3.6870	4.2740		
Sample Duplicate Result (pCi/L, g, F):	13.8310	24.2830		
Duplicate Sample 1.96 Sigma Unc:	3.5210	5.0070		
Either results below MDC?	NO	NO		
Relative Percent Difference:	8.37%	19.05%		
Assessment:	Pass	Pass		
% RPD Limit:	34.00%	29.00%		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Opinion

Sample Matrix Spike Control Assessment				
Gross Alpha		Gross Beta		
Sample Collection Date:	7/28/2014	7/28/2014		
Sample I.D.:	30126086001	30126086001		
Sample MS I.D.:	30126086001MS	30126086001MS		
Sample MSD I.D.:				
Spike I.D.:	13-048GA	13-047GB		
MS/MSD Decay Corrected Spike Conc. (pCi/L):	64.598	84.590		
Spike Volume Used in MS (mL):	0.10	0.10		
MS Aliquot (L, g, F):	0.2003	0.2003		
MS Target Conc. (pCi/L, g, F):	32.256	42.238		
MSD Aliquot (L, g, F):				
MSD Target Conc. (pCi/L, g, F):	1.138	2.566		
MS Spike uncertainty (calculated):				
MSD Spike uncertainty (calculated):				
Sample 1.96 Sigma Unc:	0.193	1.908		
Sample Matrix Spike Result:	1.157	1.050		
Sample MS 1.96 Sigma Unc:	25.569	50.468		
Sample Matrix Spike Duplicate Result:	7.227	9.685		
Sample MSD 1.96 Sigma Unc:				
MS % Recovery:	78.73%	114.97%		
MSD % Recovery:				
MS Assessment:	Pass	Pass		
MS/MSD Upper % Recovery Limits:	121.00%	130.00%		
MS/MSD Lower % Recovery Limits:	69.00%	79.00%		

Matrix Spike/Matrix Spike Duplicate Sample Assessment				
Analyte:	Sample I.D.:	Sample I.D.:	Sample I.D.:	Sample I.D.:

August 05, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013014

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 22, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013014

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Manganese possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Manganese ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).



ASSET Laboratories

Date: 05-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013014
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013014-001A	MW-765-059b-Q3	Water	7/22/2014 2:30:00 PM	7/22/2014	8/5/2014
N013014-002A	MW-763-059b-Q3	Water	7/22/2014 2:47:00 PM	7/22/2014	8/5/2014
N013014-003A	MW-768-059b-Q3	Water	7/22/2014 2:30:00 PM	7/22/2014	8/5/2014
N013014-004A	CA-MW-105-059b-Q3	Water	7/22/2014 12:56:00 PM	7/22/2014	8/5/2014
N013014-004B	CA-MW-105-059b-Q3	Water	7/22/2014 12:56:00 PM	7/22/2014	8/5/2014
N013014-004C	CA-MW-105-059b-Q3	Water	7/22/2014 12:56:00 PM	7/22/2014	8/5/2014
N013014-004D	CA-MW-105-059b-Q3	Water	7/22/2014 12:56:00 PM	7/22/2014	8/5/2014
N013014-005A	CA-MW-105D-059b-Q3	Water	7/22/2014 12:05:00 PM	7/22/2014	8/5/2014
N013014-005B	CA-MW-105D-059b-Q3	Water	7/22/2014 12:05:00 PM	7/22/2014	8/5/2014
N013014-005C	CA-MW-105D-059b-Q3	Water	7/22/2014 12:05:00 PM	7/22/2014	8/5/2014
N013014-005D	CA-MW-105D-059b-Q3	Water	7/22/2014 12:05:00 PM	7/22/2014	8/5/2014
N013014-006A	CA-MW-106D-059b-Q3	Water	7/22/2014 2:39:00 PM	7/22/2014	8/5/2014
N013014-006B	CA-MW-106D-059b-Q3	Water	7/22/2014 2:39:00 PM	7/22/2014	8/5/2014
N013014-006C	CA-MW-106D-059b-Q3	Water	7/22/2014 2:39:00 PM	7/22/2014	8/5/2014
N013014-006D	CA-MW-106D-059b-Q3	Water	7/22/2014 2:39:00 PM	7/22/2014	8/5/2014
N013014-007A	CA-MW-106S-059b-Q3	Water	7/22/2014 1:59:00 PM	7/22/2014	8/5/2014
N013014-007B	CA-MW-106S-059b-Q3	Water	7/22/2014 1:59:00 PM	7/22/2014	8/5/2014
N013014-007C	CA-MW-106S-059b-Q3	Water	7/22/2014 1:59:00 PM	7/22/2014	8/5/2014
N013014-007D	CA-MW-106S-059b-Q3	Water	7/22/2014 1:59:00 PM	7/22/2014	8/5/2014
N013014-008A	CA-MW-403D-059b-Q3	Water	7/22/2014 10:07:00 AM	7/22/2014	8/5/2014
N013014-008B	CA-MW-403D-059b-Q3	Water	7/22/2014 10:07:00 AM	7/22/2014	8/5/2014
N013014-009A	CA-MW-404D-059b-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013014-009B	CA-MW-404D-059b-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013014-010A	MW-764-059b-Q3	Water	7/22/2014 12:25:00 PM	7/22/2014	8/5/2014
N013014-011A	MW-766-059b-Q3	Water	7/22/2014 9:40:00 AM	7/22/2014	8/5/2014
N013014-012A	MW-767-059b-Q3	Water	7/22/2014 1:45:00 PM	7/22/2014	8/5/2014
N013014-013A	MW-929-059B-Q3	Water	7/22/2014 2:05:00 PM	7/22/2014	8/5/2014
N013014-013B	MW-929-059B-Q3	Water	7/22/2014 2:05:00 PM	7/22/2014	8/5/2014
N013014-013C	MW-929-059B-Q3	Water	7/22/2014 2:05:00 PM	7/22/2014	8/5/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013014
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013014-013D	MW-929-059B-Q3	Water	7/22/2014 2:05:00 PM	7/22/2014	8/5/2014
N013014-014A	SA-MW-09S-59B-Q3	Water	7/22/2014 1:55:00 PM	7/22/2014	8/5/2014
N013014-014B	SA-MW-09S-59B-Q3	Water	7/22/2014 1:55:00 PM	7/22/2014	8/5/2014
N013014-014C	SA-MW-09S-59B-Q3	Water	7/22/2014 1:55:00 PM	7/22/2014	8/5/2014
N013014-014D	SA-MW-09S-59B-Q3	Water	7/22/2014 1:55:00 PM	7/22/2014	8/5/2014



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-001

Client Sample ID: MW-765-059b-Q3
Collection Date: 7/22/2014 2:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 03:45 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 02:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-002

Client Sample ID: MW-763-059b-Q3
Collection Date: 7/22/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 04:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 02:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-003

Client Sample ID: MW-768-059b-Q3
Collection Date: 7/22/2014 2:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 04:47 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 03:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-004

Client Sample ID: CA-MW-105-059b-Q3
Collection Date: 7/22/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	24	0.032	0.40		µg/L	2	7/24/2014 08:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-105D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 12:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297			PrepDate			Analyst: QBM
Hexavalent Chromium	29	0.080	1.0		µg/L	5	7/24/2014 04:04 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297	PrepDate	Analyst: QBM
Hexavalent Chromium	ND 0.016	0.20	µg/L 1 7/24/2014 04:13 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106S-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 1:59:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-008

Client Sample ID: CA-MW-403D-059b-Q3
Collection Date: 7/22/2014 10:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297			PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20	µg/L	1	7/24/2014 04:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-404D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297			PrepDate			Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 05:10 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-010

Client Sample ID: MW-764-059b-Q3
Collection Date: 7/22/2014 12:25:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 05:08 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 07:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-011

Client Sample ID: MW-766-059b-Q3
Collection Date: 7/22/2014 9:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 05:29 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 06:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-012

Client Sample ID: MW-767-059b-Q3
Collection Date: 7/22/2014 1:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 05:49 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 06:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-013

Client Sample ID: MW-929-059B-Q3
Collection Date: 7/22/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	470	0.80	10		µg/L	50	7/24/2014 08:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-014

Client Sample ID: SA-MW-09S-59B-Q3
Collection Date: 7/22/2014 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297			PrepDate			Analyst: QBM
Hexavalent Chromium	460	0.80	10		µg/L	50	7/24/2014 05:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94368	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: PBW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816306
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94368	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: LCSW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816307
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.196	0.060	0.2000	0	98.0 90 110
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Sample ID N013005-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816309
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.018	0.060			0.01905 0 20
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Sample ID N013005-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816310
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.215	0.060	0.2000	0.01905	97.8 90 110
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Sample ID N013005-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816312
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.213	0.060	0.2000	0.01606	98.2 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110				

Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110				

Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110				

Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110				

Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110				

Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110				

Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94297	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: PBW	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813305						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94297	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: LCSW	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813306						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.021	0.20	5.000	0	100	90	110				
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Sample ID N013016-011ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813310						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.713	0.20						0.7201	1.06	20	
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Sample ID N013016-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.724	0.20	1.000	0.7201	100	90	110				
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Sample ID N013016-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.116	0.20	1.000	2.106	101	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-013A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.100	0.20	1.000	2.106	99.4	90	110	3.116	0.524	20	

Sample ID N013014-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID N013014-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0	100	90	110				

Sample ID N013014-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.034	0.20	1.000	0.01820	102	90	110				

Sample ID N013014-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.004	0.20	1.000	0	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013014-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1813331							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.021	0.20	1.000	0	102	90	110				

Sample ID N013014-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1813333							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N013014-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1813335							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0	101	90	110				

Sample ID N013014-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1813339							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0	103	90	110				

Sample ID N013014-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1813341							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.024	0.20	1.000	0	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N013014-012A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:	RunNo:	94297	
Client ID:	ZZZZZZ	Batch ID:	R94297	TestNo:	EPA 218.6	Analysis Date:	7/24/2014	SeqNo:	1813343		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.030	0.20	1.000	0.02120	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-004

Client Sample ID: CA-MW-105-059b-Q3
Collection Date: 7/22/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/24/2014 12:28 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	4.2	0.026	0.25		mg/L	5	7/24/2014 04:53 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-005

Client Sample ID: CA-MW-105D-059b-Q3
Collection Date: 7/22/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	130	0.66	10		mg/L	20	7/24/2014 12:40 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	7/23/2014 07:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-006

Client Sample ID: CA-MW-106D-059b-Q3
Collection Date: 7/22/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	7/23/2014 10:24 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	210	0.66	10		mg/L	20	7/24/2014 12:53 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294				PrepDate		Analyst: PS
Nitrate as N	0.060	0.0051	0.050		mg/L	1	7/23/2014 10:24 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-007

Client Sample ID: CA-MW-106S-059b-Q3
Collection Date: 7/22/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	0.29	0.027	0.10		mg/L	1	7/23/2014 04:30 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/24/2014 01:06 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	7/23/2014 04:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-013

Client Sample ID: MW-929-059B-Q3
Collection Date: 7/22/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	46	0.66	10		mg/L	20	7/24/2014 01:18 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	0.67	0.0051	0.050		mg/L	1	7/23/2014 08:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-014

Client Sample ID: SA-MW-09S-59B-Q3
Collection Date: 7/22/2014 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	45	0.66	10		mg/L	20	7/24/2014 01:31 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	0.62	0.0051	0.050		mg/L	1	7/23/2014 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013014
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID	MB-R94294_PO4	SampType:	MBLK	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	PBW	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813240			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	ND	0.10												
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Sample ID	LCS-R94294_PO4	SampType:	LCS	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	LCSW	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813241			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	2.545	0.10	2.500	0	102	90	110							
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Sample ID	N013014-007C-MS	SampType:	MS	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813247			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	1.417	0.10	2.500	0.2880	45.2	80	120							S
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Sample ID	N013014-007C-MSD	SampType:	MSD	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813248			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	1.706	0.10	2.500	0.2880	56.7	80	120	1.417	18.5	20	S
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Sample ID	N013014-007C-DUP	SampType:	DUP	TestCode:	300_W_PO4P	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813250			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	0.301	0.10								0.2880	4.41	20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013014-004C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0	Analysis Date: 7/24/2014	SeqNo: 1813516							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	246.740	10	100.0	151.4	95.3	80	120	248.8	0.823	20	

Sample ID N013014-005C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0	Analysis Date: 7/24/2014	SeqNo: 1813517							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	233.880	10	100.0	133.7	100	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013014-007C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94294						
Client ID: ZZZZZZ	Batch ID: R94294	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813277						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.024	0.050						0.02100	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013016-022C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813474						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.750	0.25	5.000	3.845	98.1	80	120	8.550	2.31	20	

Sample ID N013016-024C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	16.600	0.50	10.00	7.280	93.2	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-004

Client Sample ID: CA-MW-105-059b-Q3
Collection Date: 7/22/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	7/24/2014 08:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-105D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 12:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 08:39 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 09:02 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106S-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 1:59:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140724A	QC Batch: R94302			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/24/2014 09:25 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-013

Client Sample ID: MW-929-059B-Q3
Collection Date: 7/22/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140726A	QC Batch: R94322			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/26/2014 05:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-014

Client Sample ID: SA-MW-09S-59B-Q3
Collection Date: 7/22/2014 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140726A	QC Batch: R94322			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/26/2014 06:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94302	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302
Client ID: PBW	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813539
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0			
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Sample ID LCS-R94302	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302
Client ID: LCSW	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813540
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.481	1.0	10.00	0	105 85 115
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Sample ID N013004-012D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302
Client ID: ZZZZZ	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813541
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.078	1.0	10.00	0.8086	92.7 75 125
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Sample ID N013004-012D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94302
Client ID: ZZZZZ	Batch ID: R94302	TestNo: SM 5310C		Analysis Date: 7/24/2014	SeqNo: 1813542
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	9.729	1.0	10.00	0.8086	89.2 75 125 10.08 3.53 20
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94322	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322						
Client ID: PBW	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814155						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94322	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322						
Client ID: LCSW	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814156						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.712 1.0 10.00 0 107 85 115

Sample ID N013054-001D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322						
Client ID: ZZZZZ	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814157						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.435 1.0 10.00 0.5479 98.9 75 125

Sample ID N013054-001D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322						
Client ID: ZZZZZ	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.523 1.0 10.00 0.5479 99.7 75 125 10.43 0.840 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-105-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 12:56:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L
			1
			7/24/2014 05:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-105D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 12:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151	PrepDate: 7/24/2014	Analyst: CEI
Iron	0.13 0.0013	0.020	mg/L 1 7/24/2014 05:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151	PrepDate: 7/24/2014	Analyst: CEI
Iron	4.5 0.0013	0.020	mg/L 1 7/24/2014 06:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106S-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 1:59:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151	PrepDate: 7/24/2014	Analyst: CEI
Iron	1.6 0.0013	0.020	mg/L 1 7/24/2014 06:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-403D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151	PrepDate: 7/24/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			7/24/2014 06:12 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-404D-059b-Q3
Lab Order: N013014 **Collection Date:** 7/22/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013014-009

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140724B** QC Batch: **46151** PrepDate: **7/24/2014** Analyst: **CEI**
Iron 0.041 0.0013 0.020 mg/L 1 7/24/2014 06:16 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-013

Client Sample ID: MW-929-059B-Q3
Collection Date: 7/22/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151			PrepDate	7/24/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 06:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-014

Client Sample ID: SA-MW-09S-59B-Q3
Collection Date: 7/22/2014 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140724B	QC Batch: 46151			PrepDate	7/24/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	7/24/2014 06:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46151	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: PBW	Batch ID: 46151	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813212
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.002	0.020			

Sample ID LCS-46151	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: LCSW	Batch ID: 46151	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813213
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.103	0.020	0.1000	0	103 85 115

Sample ID N013014-004B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZZ	Batch ID: 46151	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813219
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.108	0.020	0.1000	0.01723	90.8 75 125

Sample ID N013014-004B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94293
Client ID: ZZZZZZ	Batch ID: 46151	TestNo: EPA 6010B EPA 3010A		Analysis Date: 7/24/2014	SeqNo: 1813220
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.106	0.020	0.1000	0.01723	89.0 75 125 0.1080 1.72 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-004

Client Sample ID: CA-MW-105-059b-Q3
Collection Date: 7/22/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014	Analyst: CEI
Arsenic	0.83	0.027	0.10	µg/L	1	7/30/2014 12:49 AM
Manganese	1000	0.26	5.0	µg/L	10	7/31/2014 12:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-105D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 12:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014	Analyst: CEI	
Arsenic	5.5	0.027	0.10		µg/L	1	7/30/2014 12:54 AM
Manganese	1200	0.26	5.0		µg/L	10	7/31/2014 12:20 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014		Analyst: CEI
Arsenic	52	0.027	0.10		µg/L	1	7/30/2014 01:00 AM
Manganese	5900	1.3	25		µg/L	50	7/31/2014 12:26 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-106S-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 1:59:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014	Analyst: CEI
Arsenic	7.9	0.027	0.10		µg/L	1 7/30/2014 01:05 AM
Manganese	670	0.26	5.0		µg/L	10 7/31/2014 12:31 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-403D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 10:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-008	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014		Analyst: CEI
Arsenic	2.6	0.027	0.10		µg/L	1	7/30/2014 01:11 AM
Manganese	200	0.13	2.5		µg/L	5	7/31/2014 12:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-404D-059b-Q3
Lab Order: N013014	Collection Date: 7/22/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013014-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014	Analyst: CEI	
Arsenic	2.1	0.027	0.10		µg/L	1	7/30/2014 01:27 AM
Manganese	220	0.13	2.5		µg/L	5	7/31/2014 12:42 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-013

Client Sample ID: MW-929-059B-Q3
Collection Date: 7/22/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144			PrepDate	7/24/2014	Analyst: CEI
Arsenic	1.1	0.027	0.10	µg/L	1	7/30/2014 01:31 AM
Manganese	15	0.026	0.50	µg/L	1	7/30/2014 01:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013014-014

Client Sample ID: SA-MW-09S-59B-Q3
Collection Date: 7/22/2014 1:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140729B	QC Batch: 46144				PrepDate: 7/24/2014		Analyst: CEI
Arsenic	1.1	0.027	0.10		µg/L	1	7/30/2014 01:37 AM
Manganese	14	0.026	0.50		µg/L	1	7/30/2014 01:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013014
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46144	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348
Client ID: PBW	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816371
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46144	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348
Client ID: LCSW	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816372
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	11.081	0.10	10.00	0	111 85 115
Manganese	104.368	0.50	100.0	0	104 85 115

Sample ID N013006-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348
Client ID: ZZZZZ	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816376
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.513	0.10	10.00	0.9430	116 75 125
Manganese	78.192	0.50	100.0	0	78.2 75 125







Sample ID N013006-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94348
Client ID: ZZZZZ	Batch ID: 46144	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/29/2014	SeqNo: 1816377
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.756	0.10	10.00	0.9430	98.1 75 125 12.51 15.1 20
Manganese	62.889	0.50	100.0	0	62.9 75 125 78.19 21.7 20 SR

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS	
Location Hinkley				Preservatives:	(NH4)2, SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	H2SO4, 4°C			
Project Number 492581.UR.IR.FW				Filtered:	Field	Field	Field	Field	Field	NA			
Project Manager Jennifer Low				Holding Time (days):	28	180	180	2	2	28			
Sample Manager Jim Hanvey				Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As,Mn	Anions (E300.0) FF NO3N, SO4	Ortho-Phosphate (E300.0) FF	TOC (E5310)				
Cell Number (404) 229-2181													
Fax Number (510) 622-9136													
Task Order 59													
Project 2014-COMPLIANCE-IRZ-059B-Q3													
Turnaround Time 10 Days													
Shipping Date:													
COC Number:													
SAMPLE ID	DATE	TIME	Matrix										
MW-765-059b-Q3	7/22/2014	1430	Water	X							NO13014-1 ↓ -2 -3 -4 -5 -6 -7 -8 -9 -10 -11 -12 -13 -14	1	JM
MW-763-059b-Q3	7/22/2014	1447	Water	X								1	JD
MW-768-059b-Q3	7/22/2014	1430	Water	X								1	MD
CA-MW-105-059b-Q3	7/22/2014	1256	Water	X	X	X	X		X			6	PM
CA-MW-105D-059b-Q3	7/22/2014	1205	Water	X	X	X	X		X			6	PM
CA-MW-106D-059b-Q3	7/22/2014	1439	Water	X	X	X	X	X	X			6	PM
CA-MW-106S-059b-Q3	7/22/2014	1359	Water	X	X	X	X	X	X			6	PM
CA-MW-403D-059b-Q3	7/22/2014	1007	Water	X	X	X						2	PM
CA-MW-404D-059b-Q3	7/22/2014	1101	Water	X	X	X						2	PM
MW-764-059b-Q3	7/22/2014	1225	Water	X								1	PM
MW-766-059b-Q3	7/22/2014	0940	Water	X								1	SD
MW-767-059b-Q3	7/22/2014	1345	Water	X								1	TH
MW-929-059B-Q3	7/22/2014	1405	Water	X	X	X	X		X			6	MD
SA-MW-09S-59B-Q3	7/22/2014	1355	Water	X	X	X	X		X			6	MD
TOTAL NUMBER OF CONTAINERS											46		

Signatures Approved by  Sampled by  Relinquished by  Received by  Relinquished by  Received by 		Date/Time 7/22/14 1635 7/22/14 1635 7/22/14 1635 7/22/14 1640 7/22/14 1638		Shipping Details Method of Shipment: 1, 2, 3, 4°C On Ice: <input checked="" type="radio"/> yes <input type="radio"/> no Airbill No: IR#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/22/2014 Workorder: N013014
 Rep sample Temp (Deg C): 1.2/3.4 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

For: MBC  7/23/2014

Reviewed By:

 07/28/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013014-012A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.022269 * 1 \\ &= 0.022269\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/5/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013014-004A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 11.8095 * 2 \\ &= 23.619\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 24$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Orthophosphate concentration, in mg/L, in the original sample as follows:

$$\text{Orthophosphate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013014-007C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Orthophosphate, mg/L} &= 0.288 * 1 \\ &= 0.288 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Orthophosphate, mg/L} = \mathbf{0.29}$$

 8/5/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N013014-014D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.50980] [1] - 0.04820$$

$$\text{TOC} = 0.46160$$

Reporting results in two significant figures,

$$\text{TOC} = 0.46 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 8/4/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013014-005B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.1255233658 * 1 * (25/25) \\ &= 0.1255233658 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.13$$

Manny 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013014
Test Method: EPA 6010
Analysis Date: 7/24/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46151

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS @2X passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013014-004B-DT 5X	Iron	mg/L	0.0244185	NA	0.017229097	41.73%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013014-004B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94293						
Client ID: ZZZZZ	Batch ID: 46151	TestNo: EPA 6010B EPA 3010A	Analysis Date: 7/24/2014	SeqNo: 1813216							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	4.728	0.040	5.000	0.01723	94.2	80	120				
------	-------	-------	-------	---------	------	----	-----	--	--	--	--

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Arsenic concentration, in ug/L, in the original sample as follows:

$$\text{Arsenic, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013014-004B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Arsenic, ug/L} &= 0.82701301083 * 1 * (25/25) \\ &= 0.82701301083 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Arsenic, ug/L} = 0.83$$

 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013014
Test Method: EPA 6020
Analysis Date: 7/29/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46144

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to As & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013006-001B-DT 5X	Arsenic	µg/L	0.884565293	NA	0.942981311	6.19%	10
N013006-001B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013014
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013006-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94348						
Client ID: ZZZZZ	Batch ID: 46144	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/29/2014	SeqNo: 1816375						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	24.549	0.20	20.00	0.9430	118	80	120				
Manganese	181.428	1.0	200.0	0	90.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 05, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013015

RE: PGE Hinkley, 492581.UR.AU.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 22, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013015

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 05-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013015
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013015-001A	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-001B	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-001C	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-001D	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-001E	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-001F	MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	7/22/2014	8/5/2014
N013015-002A	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-002B	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-002C	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-002D	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-002E	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-002F	MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	7/22/2014	8/5/2014
N013015-003A	MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	7/22/2014	8/5/2014
N013015-003B	MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	7/22/2014	8/5/2014
N013015-003C	MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	7/22/2014	8/5/2014
N013015-003D	MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	7/22/2014	8/5/2014
N013015-003E	MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	7/22/2014	8/5/2014
N013015-004A	MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	7/22/2014	8/5/2014
N013015-004B	MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	7/22/2014	8/5/2014
N013015-004C	MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	7/22/2014	8/5/2014
N013015-004D	MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	7/22/2014	8/5/2014
N013015-004E	MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	7/22/2014	8/5/2014
N013015-005A	MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	7/22/2014	8/5/2014
N013015-005B	MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	7/22/2014	8/5/2014
N013015-005C	MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	7/22/2014	8/5/2014
N013015-005D	MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	7/22/2014	8/5/2014
N013015-005E	MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	7/22/2014	8/5/2014
N013015-006A	MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	7/22/2014	8/5/2014
N013015-006B	MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	7/22/2014	8/5/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013015
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013015-006C	MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	7/22/2014	8/5/2014
N013015-006D	MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	7/22/2014	8/5/2014
N013015-006E	MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	7/22/2014	8/5/2014
N013015-007A	MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	7/22/2014	8/5/2014
N013015-007B	MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	7/22/2014	8/5/2014
N013015-007C	MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	7/22/2014	8/5/2014
N013015-007D	MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	7/22/2014	8/5/2014
N013015-007E	MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	7/22/2014	8/5/2014
N013015-008A	MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	7/22/2014	8/5/2014
N013015-008B	MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	7/22/2014	8/5/2014
N013015-008C	MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	7/22/2014	8/5/2014
N013015-008D	MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	7/22/2014	8/5/2014
N013015-008E	MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	7/22/2014	8/5/2014
N013015-009A	DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	7/22/2014	8/5/2014
N013015-009B	DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	7/22/2014	8/5/2014
N013015-009C	DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	7/22/2014	8/5/2014
N013015-009D	DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	7/22/2014	8/5/2014
N013015-009E	DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	7/22/2014	8/5/2014
N013015-010A	MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013015-010B	MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013015-010C	MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013015-010D	MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013015-010E	MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	7/22/2014	8/5/2014
N013015-011A	MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	7/22/2014	8/5/2014
N013015-011B	MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	7/22/2014	8/5/2014
N013015-011C	MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	7/22/2014	8/5/2014
N013015-011D	MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	7/22/2014	8/5/2014
N013015-011E	MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	7/22/2014	8/5/2014



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-001

Client Sample ID: MW-49A-059-Q3
Collection Date: 7/22/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168			PrepDate	7/24/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-002

Client Sample ID: MW-49B-059-Q3
Collection Date: 7/22/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168			PrepDate	7/24/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-003

Client Sample ID: MW-56-059-Q3
Collection Date: 7/22/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168			PrepDate	7/24/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-004

Client Sample ID: MW-127S1-059-Q3
Collection Date: 7/22/2014 12:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168				PrepDate: 7/24/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	4500	33	33		mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-005

Client Sample ID: MW-958-059-Q3
Collection Date: 7/22/2014 12:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168			PrepDate	7/24/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	4500	33	33	mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-006

Client Sample ID: MW-127S2-059-Q3
Collection Date: 7/22/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140724B	QC Batch: 46168				PrepDate: 7/24/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3500	25	25		mg/L	1	7/24/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-007

Client Sample ID: MW-105D-059-Q3
Collection Date: 7/22/2014 9:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	330	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-008

Client Sample ID: MW-105S-059-Q3
Collection Date: 7/22/2014 8:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	740	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-009

Client Sample ID: DW-02-059-Q3
Collection Date: 7/22/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2900	25	25	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-84D-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 11:01:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-011

Client Sample ID: MW-84S-059-Q3
Collection Date: 7/22/2014 12:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	3500	33	33	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46168	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94304						
Client ID: PBW	Batch ID: 46168	TestNo: SM2540C		Analysis Date: 7/24/2014	SeqNo: 1813598						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46168	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94304						
Client ID: LCSW	Batch ID: 46168	TestNo: SM2540C		Analysis Date: 7/24/2014	SeqNo: 1813599						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		947.000	10	1000	0	94.7	80	120			

Sample ID N013015-001D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/24/2014	RunNo: 94304						
Client ID: ZZZZZ	Batch ID: 46168	TestNo: SM2540C		Analysis Date: 7/24/2014	SeqNo: 1813601						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		1101.000	10					1114	1.17	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46190	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: PBW	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) ND 10

Sample ID LCS-46190	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: LCSW	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 946.000 10 1000 0 94.6 80 120

Sample ID N013015-007D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: ZZZZZZ	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 326.000 10 332.0 1.82 5

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-001

Client Sample ID: MW-49A-059-Q3
Collection Date: 7/22/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	36	0.057	3.4	pCi/L	5	7/31/2014 02:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-002

Client Sample ID: MW-49B-059-Q3
Collection Date: 7/22/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	38	0.057	3.4	pCi/L	5	7/31/2014 02:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-127S1-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	81	0.057	3.4	pCi/L	5	7/31/2014 03:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-958-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	75	0.057	3.4	pCi/L	5	7/31/2014 03:06 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-127S2-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 10:54:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	45	0.057	3.4	pCi/L	5	7/31/2014 03:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-007

Client Sample ID: MW-105D-059-Q3
Collection Date: 7/22/2014 9:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147				PrepDate: 7/24/2014		Analyst: CEI
Uranium	4.3	0.023	1.3		pCi/L	2	7/31/2014 03:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-008

Client Sample ID: MW-105S-059-Q3
Collection Date: 7/22/2014 8:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	21	0.057	3.4	pCi/L	5	7/31/2014 03:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-009

Client Sample ID: DW-02-059-Q3
Collection Date: 7/22/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	77	0.057	3.4	pCi/L	5	7/31/2014 03:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-010

Client Sample ID: MW-84D-059-Q3
Collection Date: 7/22/2014 11:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	4.0	0.023	1.3	pCi/L	2	7/31/2014 03:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-011

Client Sample ID: MW-84S-059-Q3
Collection Date: 7/22/2014 12:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140731A	QC Batch: 46147			PrepDate	7/24/2014	Analyst: CEI
Uranium	27	0.057	3.4	pCi/L	5	7/31/2014 03:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46147	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: PBW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816477
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	ND	0.67			
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Sample ID LCS-46147	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: LCSW	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816478
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	6.805	0.67	6.700	0	102 85 115
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Sample ID N013006-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816484
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	132.682	3.4	6.700	135.6	-43.9 75 125 S
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Sample ID N013006-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816485
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	133.137	3.4	6.700	135.6	-37.2 75 125 132.7 0.342 20 S
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Sample ID N013015-002B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/24/2014	RunNo: 94369
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8		Analysis Date: 7/31/2014	SeqNo: 1816499
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	44.289	3.4	6.700	37.51	101 75 125
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-001

Client Sample ID: MW-49A-059-Q3
Collection Date: 7/22/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	3.8	0.016	0.20		µg/L	1	7/23/2014 07:36 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	3.9	0.030	1.0		µg/L	1	7/31/2014 07:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-002

Client Sample ID: MW-49B-059-Q3
Collection Date: 7/22/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/23/2014 08:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	7/31/2014 08:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-003

Client Sample ID: MW-56-059-Q3
Collection Date: 7/22/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	5.4	0.016	0.20		µg/L	1	7/23/2014 08:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	5.6	0.030	1.0		µg/L	1	7/31/2014 08:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-004

Client Sample ID: MW-127S1-059-Q3
Collection Date: 7/22/2014 12:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/23/2014 08:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/31/2014 08:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-005

Client Sample ID: MW-958-059-Q3
Collection Date: 7/22/2014 12:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/24/2014 12:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.6	0.030	1.0		µg/L	1	7/31/2014 08:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-006

Client Sample ID: MW-127S2-059-Q3
Collection Date: 7/22/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/23/2014 09:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	7/31/2014 08:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-007

Client Sample ID: MW-105D-059-Q3
Collection Date: 7/22/2014 9:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 06:43 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 10:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/31/2014 08:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-008

Client Sample ID: MW-105S-059-Q3
Collection Date: 7/22/2014 8:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/23/2014 10:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	7/31/2014 09:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-009

Client Sample ID: DW-02-059-Q3
Collection Date: 7/22/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/23/2014 11:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	7/31/2014 09:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-010

Client Sample ID: MW-84D-059-Q3
Collection Date: 7/22/2014 11:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	0.23	0.016	0.20		µg/L	1	7/24/2014 01:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/31/2014 09:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-011

Client Sample ID: MW-84S-059-Q3
Collection Date: 7/22/2014 12:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140723B	QC Batch: R94284				PrepDate		Analyst: QBM
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/23/2014 11:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	7/31/2014 09:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94368	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: PBW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816306
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94368	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: LCSW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816307
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.196	0.060	0.2000	0	98.0 90 110
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Sample ID N013005-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816309
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.018	0.060			0.01905 0 20
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Sample ID N013005-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816310
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.215	0.060	0.2000	0.01905	97.8 90 110
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Sample ID N013005-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816312
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.213	0.060	0.2000	0.01606	98.2 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110
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Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110
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Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110
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Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110
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Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110				

Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110				

Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID LCS-R94284	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: LCSW	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812876						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.064	0.20	5.000	0	101	90	110				

Sample ID MB-R94284	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: PBW	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812877						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID N013015-001ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812882						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.844	0.20						3.762	2.16	20	

Sample ID N013015-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.880	0.20	5.000	3.762	102	90	110				

Sample ID N013015-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812884						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.923	0.20	5.000	3.762	103	90	110	8.880	0.488	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812886						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.135	0.20	5.000	2.043	102	90	110				

Sample ID N013015-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.630	0.20	5.000	5.430	104	90	110				

Sample ID N013015-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812890						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.089	0.20	1.000	2.092	99.7	90	110				

Sample ID N013015-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812894						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.369	0.20	1.000	1.307	106	90	110				

Sample ID N013015-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812896						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.149	0.20	1.000	0.08020	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6	Analysis Date: 7/23/2014	SeqNo: 1812898							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.847	0.20	1.000	2.774	107	90	110				

Sample ID N013015-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6	Analysis Date: 7/23/2014	SeqNo: 1812902							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.384	0.20	1.000	1.387	99.7	90	110				

Sample ID N013015-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94284						
Client ID: ZZZZZZ	Batch ID: R94284	TestNo: EPA 218.6	Analysis Date: 7/24/2014	SeqNo: 1812904							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.830	0.20	1.000	1.794	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94316	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: PBW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94316	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: LCSW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.109	0.20	5.000	0	102	90	110				
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Sample ID N013015-005A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813967						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.052	0.20						2.089	1.77	20	
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Sample ID N013015-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.063	0.20	1.000	2.089	97.5	90	110				
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Sample ID N013015-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.252	0.20	1.000	0.2289	102	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-010A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.205	0.20	1.000	0.2289	97.6	90	110	1.252	3.90	20	

Sample ID N013029-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.558	0.20	5.000	3.358	104	90	110				

Sample ID N013029-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.623	0.20	5.000	3.436	104	90	110				

Sample ID N013029-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.072	0.20	1.000	0	107	90	110				

Sample ID N013029-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.739	0.20	1.000	2.734	101	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013029-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	11.907	0.20	5.000	6.788	102	90	110
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Sample ID N013029-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	10.297	0.20	5.000	5.116	104	90	110
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Sample ID N013028-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813990						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110
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Sample ID N013028-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.472	0.20	1.000	0.4012	107	90	110
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Sample ID N013028-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	13.653	0.20	5.000	8.606	101	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813996						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.740	0.20	1.000	2.750	99.0	90	110				

Sample ID N013028-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.389	0.20	1.000	1.355	103	90	110				

Sample ID N013028-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.265	0.20	1.000	2.222	104	90	110				

Sample ID N013028-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.264	0.20	1.000	2.257	101	90	110				

Sample ID N013028-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46145	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: PBW	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816812						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46145	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: LCSW	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.300 1.0 10.00 0 103 85 115

Sample ID N013015-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.128 1.0 10.00 3.893 102 75 125

Sample ID N013015-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.550 1.0 10.00 3.893 107 75 125 14.13 2.95 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-001

Client Sample ID: MW-49A-059-Q3
Collection Date: 7/22/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723A** QC Batch: **R94294** PrepDate Analyst: **PS**
Nitrate as N 14 0.10 1.0 mg/L 20 7/23/2014 12:30 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-002

Client Sample ID: MW-49B-059-Q3
Collection Date: 7/22/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723A** QC Batch: **R94294** PrepDate Analyst: **PS**
Nitrate as N 16 0.10 1.0 mg/L 20 7/23/2014 01:20 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-003

Client Sample ID: MW-56-059-Q3
Collection Date: 7/22/2014 8:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723B** QC Batch: **R94295** PrepDate: Analyst: **PS**
Nitrate as N 16 0.10 1.0 mg/L 20 7/24/2014 05:06 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-127S1-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 12:10:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294			PrepDate			Analyst: PS
Nitrate as N	29	0.10	1.0	mg/L	20		7/23/2014 01:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-958-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 12:20:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294			PrepDate			Analyst: PS
Nitrate as N	29	0.10	1.0	mg/L	20		7/23/2014 01:46 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-127S2-059-Q3
Lab Order: N013015	Collection Date: 7/22/2014 10:54:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013015-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295			PrepDate			Analyst: PS
Nitrate as N	19	0.051	0.50	mg/L	10		7/23/2014 08:40 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-007

Client Sample ID: MW-105D-059-Q3
Collection Date: 7/22/2014 9:27:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723B** QC Batch: **R94295** PrepDate: Analyst: **PS**
Nitrate as N ND 0.0051 0.050 mg/L 1 7/23/2014 09:18 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-008

Client Sample ID: MW-105S-059-Q3
Collection Date: 7/22/2014 8:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723B** QC Batch: **R94295** PrepDate Analyst: **PS**
Nitrate as N 4.8 0.026 0.25 mg/L 5 7/23/2014 09:31 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-009

Client Sample ID: DW-02-059-Q3
Collection Date: 7/22/2014 2:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295			PrepDate		Analyst: PS
Nitrate as N	32	0.10	1.0	mg/L	20	7/23/2014 09:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-010

Client Sample ID: MW-84D-059-Q3
Collection Date: 7/22/2014 11:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723B** QC Batch: **R94295** PrepDate Analyst: **PS**
Nitrate as N 3.3 0.026 0.25 mg/L 5 7/23/2014 09:56 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** MW-84S-059-Q3
Lab Order: N013015 **Collection Date:** 7/22/2014 12:19:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N013015-011

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140723B** QC Batch: **R94295** PrepDate Analyst: **PS**
Nitrate as N 7.0 0.051 0.50 mg/L 10 7/23/2014 10:09 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
 Work Order: N013015
 Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94294_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	PBW	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813257			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID	LCS-R94294_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	LCSW	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813258			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.975 0.050 1.000 0 97.5 90 110

Sample ID	N013015-001C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813264			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 14.540 1.0 14.22 2.23 20

Sample ID	N013015-001C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813265			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 32.520 1.0 20.00 14.22 91.5 80 120

Sample ID	N013015-001C-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94294			
Client ID:	ZZZZZ	Batch ID:	R94294	TestNo:	EPA 300.0			Analysis Date:	7/23/2014	SeqNo:	1813266			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 33.300 1.0 20.00 14.22 95.4 80 120 32.52 2.37 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013014-007C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94294						
Client ID: ZZZZZZ	Batch ID: R94294	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813277						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.024	0.050						0.02100	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013016-022C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813474						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.750	0.25	5.000	3.845	98.1	80	120	8.550	2.31	20	

Sample ID N013016-024C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	16.600	0.50	10.00	7.280	93.2	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-001

Client Sample ID: MW-49A-059-Q3
Collection Date: 7/22/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140726A	QC Batch: R94322			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/26/2014 04:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 05-Aug-14

CLIENT: CH2M HILL
Lab Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013015-002

Client Sample ID: MW-49B-059-Q3
Collection Date: 7/22/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140726A	QC Batch: R94322			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		7/26/2014 04:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94322	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322
Client ID: PBW	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814155
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94322	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322
Client ID: LCSW	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814156
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.712	1.0	10.00	0	107	85	115				
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Sample ID N013054-001D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322
Client ID: ZZZZZ	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814157
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.435	1.0	10.00	0.5479	98.9	75	125				
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Sample ID N013054-001D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94322
Client ID: ZZZZZ	Batch ID: R94322	TestNo: SM 5310C		Analysis Date: 7/26/2014	SeqNo: 1814158
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total	10.523	1.0	10.00	0.5479	99.7	75	125	10.43	0.840	20	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/22/2014 Workorder: N013015
 Rep sample Temp (Deg C): 1.6/1.9 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist


- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

For: MBC  7/23/2014

Reviewed By:

 07/28/14



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FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013015-001F / MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	32OZP	1		
N013015-002F / MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	32OZP	1		
N013015-003E / MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	32OZP	1		
N013015-004E / MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	32OZP	1		
N013015-005E / MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	32OZP	1		
N013015-006E / MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	32OZP	1		
N013015-007E / MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	32OZP	1		
N013015-008E / MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	32OZP	1		
N013015-009E / DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	32OZP	1		
N013015-010E / MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	16OZP	1		
N013015-011E / MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	16OZP	1		

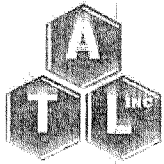
General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899
7706 7451 0465
7706 7451 0260

Please use PO#:N13015A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

	Date/Time		Date/Time
Relinquished by: <u>Al Cortez</u> 7/23/2014	1500	Received by: _____	
Relinquished by: _____		Received by: _____	



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3151-3153 W Post Rd., Las Vegas, NV 89118
www.asset-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

25-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013015-010E / MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	16OZP	1		
N013015-011E / MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	16OZP	1		

FedEx#: 7706 9479 8585
7706 9479 8380
7706 9479 8390

General Comments:

Please email sample receipt acknowledgement to the PM.

Please use PO#:N13015A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <u>Amberly Cates</u>	Date/Time: <u>7/25/14 1700</u>	Received by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013015-007D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0044-63.9712)*1000000}{100}$$

332 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 300 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/28/2014								TDS/CONDUCTIVITY
Date Finished: 7/29/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46190	100	64.1075	64.1075	0	1	0.00		
LCS-46190	100	63.5093	63.6039	946	1	946.00		
N013015-007D	100	63.9712	64.0044	332	1	332.00	492	0.67
N013015-007D-DUP	100	63.9919	64.0245	326	1	326.00	492	0.66
N013015-008D	100	64.2722	64.3467	745	1	745.00	1101	0.68
N013015-009D	40	62.9935	63.1085	1150	2.5	2875.00	3620	0.79
N013015-010D	100	63.7768	63.8819	1051	1	1051.00	1685	0.62
N013015-011D	30	63.7968	63.9008	1040	3.3333333	3466.67	4350	0.80
N013016-020D	100	61.3575	61.441	835	1	835.00	1182	0.71
N013016-021D	100	60.6311	60.6932	621	1	621.00	908	0.68
N013016-022D	100	60.9807	61.0626	819	1	819.00	1195	0.69
N013016-023D	100	60.7668	60.8494	826	1	826.00	1185	0.70
N013016-024D	100	60.8324	60.9204	880	1	880.00	1314	0.67
N013016-025D	100	61.7261	61.8437	1176	1	1176.00	1674	0.70
N013054-001C	100	60.5305	60.5793	488	1	488.00	771	0.63
N013055-003D	100	61.1315	61.2384	1069	1	1069.00	1552	0.69
N013055-004D	100	64.2518	64.3864	1346	1	1346.00	1855	0.73
N013055-005D	100	59.9055	60.0248	1193	1	1193.00	1700	0.70
N013055-007D	100	61.0168	61.0987	819	1	819.00	1243	0.66

Jmer
7/29/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N013015-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 10.712553206 * 5 * (25/25) * 0.67 \\ &= 35.8870532401 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = \mathbf{36}$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013015
Test Method: EPA 200.8
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46147

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013006-001B-DT 25X	Uranium	pCi/L	146.9270803	PASS	135.6262843	8.33%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013006-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94369						
Client ID: ZZZZZ	Batch ID: 46147	TestNo: EPA 200.8	Analysis Date: 7/31/2014	SeqNo: 1816483							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	179.666	3.4	33.50	135.6	131	80	120				S

DT @25x is within criteria

Murray 8/5/2014

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013015-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.02736 * 1 \\ &= 0.02736\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013015-003A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 5.4297 * 1 \\ &= 5.4297\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 5.4$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013015-001C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.711 * 20 \\ &= 14.22 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 14$$

Nancy 8/5/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N013015-001E**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.83870] [1] - 0.04820$$

$$\text{TOC} = 0.79050$$

Reporting results in two significant figures,

$$\text{TOC} = 0.79 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 8/4/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013015-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.8929737290464 * 1 * (25/25) \\ &= 3.8929737290464 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.9$$

Nancy 8/5/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013015
Test Method: EPA 6020
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46126

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013015-001B-DT 5X	Chromium	µg/L	3.905195687	NA	3.892973729	0.31%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013015
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013015-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94377						
Client ID: ZZZZZ	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816816						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	25.674	2.0	20.00	3.893	109	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 14, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013015
Pace Project No.: 30126275

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory between July 29, 2014 and July 31, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N013015

Pace Project No.: 30126275

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126275001	MW-49A-059-Q3	Water	07/22/14 14:14	07/29/14 09:00
30126275002	MW-49B-059-Q3	Water	07/22/14 13:28	07/29/14 09:00
30126275003	MW-56-059-Q3	Water	07/22/14 08:45	07/29/14 09:00
30126275004	MW-127S1-059-Q3	Water	07/22/14 12:10	07/29/14 09:00
30126275005	MW-958-059-Q3	Water	07/22/14 12:20	07/29/14 09:00
30126275006	MW-127S2-059-Q3	Water	07/22/14 10:54	07/29/14 09:00
30126275007	MW-105D-059-Q3	Water	07/22/14 09:27	07/29/14 09:00
30126275008	MW-105S-059-Q3	Water	07/22/14 08:22	07/29/14 09:00
30126275009	DW-02-059-Q3	Water	07/22/14 14:11	07/29/14 09:00
30126275010	MW-84D-059-Q3	Water	07/22/14 11:01	07/31/14 09:15
30126275011	MW-84S-059-Q3	Water	07/22/14 12:19	07/31/14 09:15

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SAMPLE ANALYTE COUNT

Project: N013015
Pace Project No.: 30126275

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126275001	MW-49A-059-Q3	EPA 900.0	FCC	2
30126275002	MW-49B-059-Q3	EPA 900.0	FCC	2
30126275003	MW-56-059-Q3	EPA 900.0	FCC	2
30126275004	MW-127S1-059-Q3	EPA 900.0	FCC	2
30126275005	MW-958-059-Q3	EPA 900.0	FCC	2
30126275006	MW-127S2-059-Q3	EPA 900.0	FCC	2
30126275007	MW-105D-059-Q3	EPA 900.0	FCC	2
30126275008	MW-105S-059-Q3	EPA 900.0	FCC	2
30126275009	DW-02-059-Q3	EPA 900.0	FCC	2
30126275010	MW-84D-059-Q3	EPA 900.0	FCC	2
30126275011	MW-84S-059-Q3	EPA 900.0	FCC	2

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PROJECT NARRATIVE

Project: N013015
Pace Project No.: 30126275

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 14, 2014

General Information:

11 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: N013015
Pace Project No.: 30126275

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	45.0 ± 9.20 (3.36) C:NA T:NA	pCi/L	08/06/14 19:20	12587-46-1	
Gross Beta		EPA 900.0	4.20 ± 1.36 (4.00) C:NA T:NA	pCi/L	08/06/14 19:20	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	48.5 ± 9.81 (3.28) C:NA T:NA	pCi/L	08/06/14 19:17	12587-46-1	
Gross Beta		EPA 900.0	4.66 ± 1.43 (4.00) C:NA T:NA	pCi/L	08/06/14 19:17	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	47.6 ± 9.57 (3.00) C:NA T:NA	pCi/L	08/06/14 19:20	12587-46-1	
Gross Beta		EPA 900.0	6.29 ± 1.59 (4.00) C:NA T:NA	pCi/L	08/06/14 19:20	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	71.7 ± 20.1 (19.9) C:NA T:NA	pCi/L	08/06/14 19:18	12587-46-1	
Gross Beta		EPA 900.0	11.3 ± 5.56 (8.35) C:NA T:NA	pCi/L	08/06/14 19:18	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	87.2 ± 21.8 (17.5) C:NA T:NA	pCi/L	08/06/14 19:19	12587-46-1	
Gross Beta		EPA 900.0	15.7 ± 6.30 (8.86) C:NA T:NA	pCi/L	08/06/14 19:19	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013015
Pace Project No.: 30126275

Sample: MW-127S2-059-Q3		Lab ID: 30126275006	Collected: 07/22/14 10:54	Received: 07/29/14 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	53.0 ± 12.8 (9.67)		pCi/L	08/06/14 19:19	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	5.92 ± 2.85 (4.06)		pCi/L	08/06/14 19:19	12587-47-2	
		C:NA T:NA					

Sample: MW-105D-059-Q3		Lab ID: 30126275007	Collected: 07/22/14 09:27	Received: 07/29/14 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	4.73 ± 1.37 (3.00)		pCi/L	08/06/14 19:20	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	2.07 ± 0.614 (4.00)		pCi/L	08/06/14 19:20	12587-47-2	
		C:NA T:NA					

Sample: MW-105S-059-Q3		Lab ID: 30126275008	Collected: 07/22/14 08:22	Received: 07/29/14 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	23.3 ± 5.16 (3.27)		pCi/L	08/06/14 19:19	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	4.42 ± 1.30 (4.00)		pCi/L	08/06/14 19:19	12587-47-2	
		C:NA T:NA					

Sample: DW-02-059-Q3		Lab ID: 30126275009	Collected: 07/22/14 14:11	Received: 07/29/14 09:00	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	79.5 ± 17.0 (7.95)		pCi/L	08/06/14 19:20	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	13.6 ± 3.96 (4.45)		pCi/L	08/06/14 19:20	12587-47-2	
		C:NA T:NA					

Sample: MW-84D-059-Q3		Lab ID: 30126275010	Collected: 07/22/14 11:01	Received: 07/31/14 09:15	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	4.84 ± 3.20 (5.32)		pCi/L	08/06/14 19:19	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	3.73 ± 1.33 (4.00)		pCi/L	08/06/14 19:19	12587-47-2	
		C:NA T:NA					

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013015

Pace Project No.: 30126275

Sample: MW-84S-059-Q3 **Lab ID: 30126275011** Collected: 07/22/14 12:19 Received: 07/31/14 09:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	28.6 ± 10.5 (13.7) C:NA T:NA	pCi/L	08/06/14 19:19	12587-46-1	
Gross Beta	EPA 900.0	5.91 ± 3.15 (5.02) C:NA T:NA	pCi/L	08/06/14 19:19	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N013015
Pace Project No.: 30126275

QC Batch:	RADC/20762	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30126275001, 30126275002, 30126275003, 30126275004, 30126275005, 30126275006, 30126275007, 30126275008, 30126275009, 30126275010, 30126275011		

METHOD BLANK:	768344	Matrix:	Water
Associated Lab Samples:	30126275001, 30126275002, 30126275003, 30126275004, 30126275005, 30126275006, 30126275007, 30126275008, 30126275009, 30126275010, 30126275011		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	1.08 ± 0.853 (1.41) C:NA T:NA	pCi/L	08/07/14 07:44	
Gross Beta	-0.880 ± 0.692 (1.94) C:NA T:NA	pCi/L	08/07/14 07:44	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asstlabs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: SIGNED **30126275**

23-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
1 N013015-001F / MW-49A-059-Q3	Water	7/22/2014 2:14:00 PM	32OZP	1		001
2 N013015-002F / MW-49B-059-Q3	Water	7/22/2014 1:28:00 PM	32OZP	1		002
3 N013015-003E / MW-56-059-Q3	Water	7/22/2014 8:45:00 AM	32OZP	1		003
4 N013015-004E / MW-127S1-059-Q3	Water	7/22/2014 12:10:00 PM	32OZP	1		004
5 N013015-005E / MW-958-059-Q3	Water	7/22/2014 12:20:00 PM	32OZP	1		005
6 N013015-006E / MW-127S2-059-Q3	Water	7/22/2014 10:54:00 AM	32OZP	1		006
7 N013015-007E / MW-105D-059-Q3	Water	7/22/2014 9:27:00 AM	32OZP	1		007
8 N013015-008E / MW-105S-059-Q3	Water	7/22/2014 8:22:00 AM	32OZP	1		008
9 N013015-009E / DW-02-059-Q3	Water	7/22/2014 2:11:00 PM	32OZP	1		009
10 N013015-010E / MW-84D-059-Q3	Water	7/22/2014 11:01:00 AM	16OZP	1		010
11 N013015-011E / MW-84S-059-Q3	Water	7/22/2014 12:19:00 PM	16OZP	1		011

General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 7451 0899 Please use PO#N13015A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
 7706 7451 0465 by:Normal TAT.
 7706 7451 0260

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2M-Hill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Al Cortez</i>	Date/Time: 7/23/2014 1500
Relinquished by: <i>Shawn Duffy</i>	Date/Time: 7-29-14 0900



Sample Condition Upon Receipt

Client Name: ATL

Project # 30126275

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770674510899 770694798585

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags None Other _____

Thermometer Used N/A Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: _____ °C Final Temp: _____ °C

Date and Initials of person examining contents: JML 7-29-14

Temp should be above freezing to 6°C	Comments:
Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. <u>APMC 7-29-14</u>
Sampler Name & Signature on COC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>	
All containers needing preservation have been checked: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>PHCZ</u>
All containers needing preservation are found to be in compliance with EPA recommendation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>SRA</u> Lot # of added preservative _____
Samples checked for dechlorination: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm): <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: only received samples 001-009 7-29-14 @0900, missing a cooler
Additional volume for samples 10,11 Received 7-31-14 @0915

Project Manager Review: [Signature] Date: 8/2/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: **30126275**

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil Kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubitainer (500 ml / 4L)	Ziploc	Other	Other
000	tm																							
000																								
010																								
010																								
SICA 7-31-14																								

Quality Control Sample Performance Assessment

Analyst: FCC
Date: 8/16/2014
Worklist: 20762
Matrix: Water

Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 768344



Sample Matrix Spike Control Assessment			
Analyte:	Gross Alpha	Gross Beta	
Sample Collection Date:	7/22/2014		
Sample I.D.:	30126275007	30126275007	
Sample MS I.D.:	30126275007MS	30126275007MS	
Sample MSD I.D.:	13-047GB	13-047GB	
MS/MSD Decay Corrected Spike Conc. (pCi/L):	64.598	64.623	
Spike Volume Used in MS (mL):	0.10	0.10	
Spike Volume Used in MSD (mL):			
MS Aliquot (L, g, F):	0.1557	0.1557	
MS Target Conc. (pCi/L, g, F):	41.489	54.350	
MSD Target Conc. (pCi/L, g, F):			
MSD Target Conc. (pCi/L, g, F):	1.464	3.302	
MS Spike uncertainty (calculated):			
MSD Spike uncertainty (calculated):	4.730	2.067	
Sample 1.96 Sigma Unc.:	1.368	0.614	
Sample Matrix Spike Result:	39.288	63.393	
Sample MS 1.96 Sigma Unc.:	9.902	12.193	
Sample Matrix Spike Duplicate Result:			
Sample MSD 1.96 Sigma Unc.:			
MS % Recovery:	83.23%	112.83%	
MS Assessment:	Pass	Pass	
MSD Assessment:			
MS/MSD Upper % Recovery Limits:	121.00%	130.00%	
MS/MSD Lower % Recovery Limits:	69.00%	79.00%	
Matrix Spike/Matrix Spike Duplicate Sample Assessment			
Analyte:			
Sample I.D.:			
Sample MS I.D.:			
Sample MSD I.D.:			
Sample Matrix Spike Result:			
Sample Matrix Spike 1.96 Sigma Unc.:			
Sample Matrix Spike Duplicate Result:			
Sample Matrix Spike Duplicate 1.96 Sigma Unc.:			
MS/MSD Relative Percent Difference:			
MS/MSD RPD Assessment:			
% RPD Limit:			

Method Blank Assessment						
Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	1.0840	0.8530	1.4080	0.41300		
Gross Beta	-0.8800	0.6920	1.9420	0.63900		
Laboratory Control Sample Assessment						
		LCS	LCS D	LCS	LCS D	LCS D
Gross Alpha						
Count Date:	8/7/14 7:45	8/7/14 7:45	8/7/14 7:45	8/7/14 7:45		
Spike I.D.:	13-048GA	13-047GB	13-047GB	13-047GB		
Spike Concentration (pCi/L):	64.598	64.532	84.532	84.532		
Volume Used (mL):	0.050	0.050	0.050	0.050		
Aliquot Volume (L, g, F):	0.201	0.200	0.201	0.200		
Target Conc. (pCi/L, g, F):	16.037	16.190	20.986	21.186		
1.96 Sigma Uncertainty (Calculated):	0.566	0.571	1.275	1.287		
Result (pCi/L, g, F):	14.618	16.493	21.557	23.505		
1.96 Sigma Unc.:	3.708	4.005	4.544	4.897		
% Recovery:	92.40%	101.87%	102.72%	110.95%		
Assessment:	Pass	Pass	Pass	Pass		
Upper % Recovery Limits:	121.00%	130.00%	130.00%	130.00%		
Lower % Recovery Limits:	69.00%	69.00%	79.00%	79.00%		
Duplicate Sample Assessment						
LCS/LCS D Y or N?:	Y	Y	Y	Y		
Analyte:	Gross Alpha	Gross Beta				
Sample I.D.:	LCS20762	LCS20762				
Duplicate Sample I.D.:	LCS20762	LCS20762				
Sample Result (pCi/L, g, F):	14.8180	21.5570				
1.96 Sigma Unc.:	3.7080	4.5440				
Sample Duplicate Result (pCi/L, g, F):	16.4930	23.5050				
Duplicate Sample 1.96 Sigma Unc.:	4.0050	4.8970				
Either results below MDC?:	NO	NO				
Relative Percent Difference:	10.70%	8.65%				
Assessment:	Pass	Pass				
% RPD Limit:	34.00%	29.00%				

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature

August 06, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013016

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 22, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013016

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.127 ug/L) and hexavalent chromium (1.381 ug/L) for sample N013016-019 (DW-03-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.138 and 1.211 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 06-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013016
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013016-001A	MW-41A-059-Q3	Water	7/22/2014 11:39:00 AM	7/22/2014	8/6/2014
N013016-001B	MW-41A-059-Q3	Water	7/22/2014 11:39:00 AM	7/22/2014	8/6/2014
N013016-002A	MW-41B-059-Q3	Water	7/22/2014 10:58:00 AM	7/22/2014	8/6/2014
N013016-002B	MW-41B-059-Q3	Water	7/22/2014 10:58:00 AM	7/22/2014	8/6/2014
N013016-003A	MW-41S-059-Q3	Water	7/22/2014 10:07:00 AM	7/22/2014	8/6/2014
N013016-003B	MW-41S-059-Q3	Water	7/22/2014 10:07:00 AM	7/22/2014	8/6/2014
N013016-004A	MW-49S-059-Q3	Water	7/22/2014 12:42:00 PM	7/22/2014	8/6/2014
N013016-004B	MW-49S-059-Q3	Water	7/22/2014 12:42:00 PM	7/22/2014	8/6/2014
N013016-005A	MW-111D-059-Q3	Water	7/22/2014 1:25:00 PM	7/22/2014	8/6/2014
N013016-005B	MW-111D-059-Q3	Water	7/22/2014 1:25:00 PM	7/22/2014	8/6/2014
N013016-006A	MW-111S1-059-Q3	Water	7/22/2014 2:02:00 PM	7/22/2014	8/6/2014
N013016-006B	MW-111S1-059-Q3	Water	7/22/2014 2:02:00 PM	7/22/2014	8/6/2014
N013016-007A	MW-111S2-059-Q3	Water	7/22/2014 2:31:00 PM	7/22/2014	8/6/2014
N013016-007B	MW-111S2-059-Q3	Water	7/22/2014 2:31:00 PM	7/22/2014	8/6/2014
N013016-008A	MW-980-059-Q3	Water	7/22/2014 2:41:00 PM	7/22/2014	8/6/2014
N013016-008B	MW-980-059-Q3	Water	7/22/2014 2:41:00 PM	7/22/2014	8/6/2014
N013016-009A	MW-126S1-059-Q3	Water	7/22/2014 10:13:00 AM	7/22/2014	8/6/2014
N013016-009B	MW-126S1-059-Q3	Water	7/22/2014 10:13:00 AM	7/22/2014	8/6/2014
N013016-010A	MW-126S2-059-Q3	Water	7/22/2014 9:38:00 AM	7/22/2014	8/6/2014
N013016-010B	MW-126S2-059-Q3	Water	7/22/2014 9:38:00 AM	7/22/2014	8/6/2014
N013016-011A	MW-129S-059-Q3	Water	7/22/2014 8:49:00 AM	7/22/2014	8/6/2014
N013016-011B	MW-129S-059-Q3	Water	7/22/2014 8:49:00 AM	7/22/2014	8/6/2014
N013016-012A	MW-107D-059-Q3	Water	7/22/2014 10:57:00 AM	7/22/2014	8/6/2014
N013016-012B	MW-107D-059-Q3	Water	7/22/2014 10:57:00 AM	7/22/2014	8/6/2014
N013016-013A	MW-107S-059-Q3	Water	7/22/2014 11:48:00 AM	7/22/2014	8/6/2014
N013016-013B	MW-107S-059-Q3	Water	7/22/2014 11:48:00 AM	7/22/2014	8/6/2014
N013016-014A	MW-128S1-059-Q3	Water	7/22/2014 1:51:00 PM	7/22/2014	8/6/2014
N013016-014B	MW-128S1-059-Q3	Water	7/22/2014 1:51:00 PM	7/22/2014	8/6/2014
N013016-015A	MW-984-059-Q3	Water	7/22/2014 2:01:00 PM	7/22/2014	8/6/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013016
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013016-015B	MW-984-059-Q3	Water	7/22/2014 2:01:00 PM	7/22/2014	8/6/2014
N013016-016A	MW-128S2-059-Q3	Water	7/22/2014 2:43:00 PM	7/22/2014	8/6/2014
N013016-016B	MW-128S2-059-Q3	Water	7/22/2014 2:43:00 PM	7/22/2014	8/6/2014
N013016-017A	MW-128S3-059-Q3	Water	7/22/2014 3:27:00 PM	7/22/2014	8/6/2014
N013016-017B	MW-128S3-059-Q3	Water	7/22/2014 3:27:00 PM	7/22/2014	8/6/2014
N013016-018A	DW-01-059-Q3	Water	7/22/2014 8:58:00 AM	7/22/2014	8/6/2014
N013016-018B	DW-01-059-Q3	Water	7/22/2014 8:58:00 AM	7/22/2014	8/6/2014
N013016-019A	DW-03-059-Q3	Water	7/22/2014 1:27:00 PM	7/22/2014	8/6/2014
N013016-019B	DW-03-059-Q3	Water	7/22/2014 1:27:00 PM	7/22/2014	8/6/2014
N013016-020A	EX-15-059-Q3	Water	7/22/2014 9:01:00 AM	7/22/2014	8/6/2014
N013016-020B	EX-15-059-Q3	Water	7/22/2014 9:01:00 AM	7/22/2014	8/6/2014
N013016-020C	EX-15-059-Q3	Water	7/22/2014 9:01:00 AM	7/22/2014	8/6/2014
N013016-020D	EX-15-059-Q3	Water	7/22/2014 9:01:00 AM	7/22/2014	8/6/2014
N013016-021A	EX-16-059-Q3	Water	7/22/2014 10:06:00 AM	7/22/2014	8/6/2014
N013016-021B	EX-16-059-Q3	Water	7/22/2014 10:06:00 AM	7/22/2014	8/6/2014
N013016-021C	EX-16-059-Q3	Water	7/22/2014 10:06:00 AM	7/22/2014	8/6/2014
N013016-021D	EX-16-059-Q3	Water	7/22/2014 10:06:00 AM	7/22/2014	8/6/2014
N013016-022A	EX-20-059-Q3	Water	7/22/2014 9:46:00 AM	7/22/2014	8/6/2014
N013016-022B	EX-20-059-Q3	Water	7/22/2014 9:46:00 AM	7/22/2014	8/6/2014
N013016-022C	EX-20-059-Q3	Water	7/22/2014 9:46:00 AM	7/22/2014	8/6/2014
N013016-022D	EX-20-059-Q3	Water	7/22/2014 9:46:00 AM	7/22/2014	8/6/2014
N013016-023A	MW-967-059-Q3	Water	7/22/2014 9:56:00 AM	7/22/2014	8/6/2014
N013016-023B	MW-967-059-Q3	Water	7/22/2014 9:56:00 AM	7/22/2014	8/6/2014
N013016-023C	MW-967-059-Q3	Water	7/22/2014 9:56:00 AM	7/22/2014	8/6/2014
N013016-023D	MW-967-059-Q3	Water	7/22/2014 9:56:00 AM	7/22/2014	8/6/2014
N013016-024A	EX-29-059-Q3	Water	7/22/2014 10:46:00 AM	7/22/2014	8/6/2014
N013016-024B	EX-29-059-Q3	Water	7/22/2014 10:46:00 AM	7/22/2014	8/6/2014
N013016-024C	EX-29-059-Q3	Water	7/22/2014 10:46:00 AM	7/22/2014	8/6/2014
N013016-024D	EX-29-059-Q3	Water	7/22/2014 10:46:00 AM	7/22/2014	8/6/2014
N013016-025A	EX-30-059-Q3	Water	7/22/2014 10:26:00 AM	7/22/2014	8/6/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013016
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013016-025B	EX-30-059-Q3	Water	7/22/2014 10:26:00 AM	7/22/2014	8/6/2014
N013016-025C	EX-30-059-Q3	Water	7/22/2014 10:26:00 AM	7/22/2014	8/6/2014
N013016-025D	EX-30-059-Q3	Water	7/22/2014 10:26:00 AM	7/22/2014	8/6/2014



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-15-059-Q3
Lab Order: N013016	Collection Date: 7/22/2014 9:01:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013016-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	840	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-16-059-Q3
Lab Order: N013016	Collection Date: 7/22/2014 10:06:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013016-021	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	620	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** EX-20-059-Q3
Lab Order: N013016 **Collection Date:** 7/22/2014 9:46:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW **Matrix:** WATER
Lab ID: N013016-022

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140728D** QC Batch: **46190** PrepDate: **7/28/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 820 10 10 mg/L 1 7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-023

Client Sample ID: MW-967-059-Q3
Collection Date: 7/22/2014 9:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	830	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** EX-29-059-Q3
Lab Order: N013016 **Collection Date:** 7/22/2014 10:46:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW **Matrix:** WATER
Lab ID: N013016-024

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140728D** QC Batch: **46190** PrepDate: **7/28/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 880 10 10 mg/L 1 7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** EX-30-059-Q3
Lab Order: N013016 **Collection Date:** 7/22/2014 10:26:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW **Matrix:** WATER
Lab ID: N013016-025

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL FILTERABLE RESIDUE

SM2540C

RunID: **WETCHEM_140728D** QC Batch: **46190** PrepDate: **7/28/2014** Analyst: **LCC**
Total Dissolved Solids (Residue, Filterable) 1200 10 10 mg/L 1 7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46190	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: PBW	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46190	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: LCSW	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		946.000	10	1000	0	94.6	80	120			

Sample ID N013015-007D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337						
Client ID: ZZZZZ	Batch ID: 46190	TestNo: SM2540C		Analysis Date: 7/28/2014	SeqNo: 1814863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		326.000	10					332.0	1.82	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-001

Client Sample ID: MW-41A-059-Q3
Collection Date: 7/22/2014 11:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/23/2014 05:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	7/31/2014 09:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-002

Client Sample ID: MW-41B-059-Q3
Collection Date: 7/22/2014 10:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/23/2014 05:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	3.0	0.030	1.0		µg/L	1	7/31/2014 09:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-003

Client Sample ID: MW-41S-059-Q3
Collection Date: 7/22/2014 10:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	11	0.016	0.20		µg/L	1	7/23/2014 05:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	14	0.030	1.0		µg/L	1	7/31/2014 10:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-004

Client Sample ID: MW-49S-059-Q3
Collection Date: 7/22/2014 12:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	3.8	0.016	0.20		µg/L	1	7/23/2014 06:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	4.4	0.030	1.0		µg/L	1	7/31/2014 10:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-111D-059-Q3
Lab Order: N013016	Collection Date: 7/22/2014 1:25:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013016-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 07:04 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/23/2014 08:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/31/2014 10:12 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-006

Client Sample ID: MW-111S1-059-Q3
Collection Date: 7/22/2014 2:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	7/23/2014 07:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	7/31/2014 10:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-007

Client Sample ID: MW-111S2-059-Q3
Collection Date: 7/22/2014 2:31:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723A	QC Batch: R94287				PrepDate		Analyst: QBM
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/23/2014 07:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/31/2014 10:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-008

Client Sample ID: MW-980-059-Q3
Collection Date: 7/22/2014 2:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	2.0	0.016	0.20		µg/L	1	7/23/2014 08:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	7/31/2014 10:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-009

Client Sample ID: MW-126S1-059-Q3
Collection Date: 7/22/2014 10:13:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/23/2014 09:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46145				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/31/2014 10:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-010

Client Sample ID: MW-126S2-059-Q3
Collection Date: 7/22/2014 9:38:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/23/2014 09:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	7/31/2014 10:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-011

Client Sample ID: MW-129S-059-Q3
Collection Date: 7/22/2014 8:49:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	0.72	0.016	0.20		µg/L	1	7/24/2014 12:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	7/31/2014 11:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-012

Client Sample ID: MW-107D-059-Q3
Collection Date: 7/22/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	0.56	0.016	0.20		µg/L	1	7/23/2014 11:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	7/31/2014 11:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-013

Client Sample ID: MW-107S-059-Q3
Collection Date: 7/22/2014 11:48:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	2.1	0.016	0.20		µg/L	1	7/24/2014 01:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	7/31/2014 11:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-014

Client Sample ID: MW-128S1-059-Q3
Collection Date: 7/22/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/23/2014 11:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	4.7	0.030	1.0		µg/L	1	7/31/2014 11:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-015

Client Sample ID: MW-984-059-Q3
Collection Date: 7/22/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	4.4	0.016	0.20		µg/L	1	7/24/2014 12:09 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	5.1	0.030	1.0		µg/L	1	7/31/2014 11:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-016

Client Sample ID: MW-128S2-059-Q3
Collection Date: 7/22/2014 2:43:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	3.5	0.016	0.20		µg/L	1	7/24/2014 12:28 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	7/31/2014 11:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-017

Client Sample ID: MW-128S3-059-Q3
Collection Date: 7/22/2014 3:27:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/24/2014 01:06 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	8/1/2014 12:13 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-018

Client Sample ID: DW-01-059-Q3
Collection Date: 7/22/2014 8:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/24/2014 01:25 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	3.0	0.030	1.0		µg/L	1	8/1/2014 12:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-019

Client Sample ID: DW-03-059-Q3
Collection Date: 7/22/2014 1:27:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/24/2014 01:44 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140731B	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	8/1/2014 12:24 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-15-059-Q3
Lab Order: N013016	Collection Date: 7/22/2014 9:01:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013016-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	11	0.016	0.20		µg/L	1	7/24/2014 02:10 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	11	0.030	1.0		µg/L	1	8/1/2014 10:17 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-021

Client Sample ID: EX-16-059-Q3
Collection Date: 7/22/2014 10:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	6.6	0.016	0.20		µg/L	1	7/24/2014 02:03 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	6.5	0.030	1.0		µg/L	1	8/1/2014 10:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-022

Client Sample ID: EX-20-059-Q3
Collection Date: 7/22/2014 9:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	13	0.016	0.20		µg/L	1	7/24/2014 02:22 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	13	0.030	1.0		µg/L	1	8/1/2014 10:28 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-023

Client Sample ID: MW-967-059-Q3
Collection Date: 7/22/2014 9:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	13	0.016	0.20		µg/L	1	7/24/2014 03:09 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	13	0.030	1.0		µg/L	1	8/1/2014 10:34 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: EX-29-059-Q3
Lab Order: N013016	Collection Date: 7/22/2014 10:46:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013016-024	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140724A	QC Batch: R94297				PrepDate		Analyst: QBM
Hexavalent Chromium	11	0.016	0.20		µg/L	1	7/24/2014 02:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	12	0.030	1.0		µg/L	1	8/1/2014 10:39 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-025

Client Sample ID: EX-30-059-Q3
Collection Date: 7/22/2014 10:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140723B	QC Batch: R94288				PrepDate		Analyst: QBM
Hexavalent Chromium	41	0.080	1.0		µg/L	5	7/24/2014 03:37 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46146				PrepDate	7/24/2014	Analyst: CEI
Chromium	43	0.030	1.0		µg/L	1	8/1/2014 10:45 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
 Work Order: N013016
 Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID	MB-R94368	SampType:	MBLK	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94368			
Client ID:	PBW	Batch ID:	R94368	TestNo:	EPA 218.6			Analysis Date:	7/30/2014	SeqNo:	1816306			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID	LCS-R94368	SampType:	LCS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94368			
Client ID:	LCSW	Batch ID:	R94368	TestNo:	EPA 218.6			Analysis Date:	7/30/2014	SeqNo:	1816307			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.196 0.060 0.2000 0 98.0 90 110

Sample ID	N013005-001ADUP	SampType:	DUP	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94368			
Client ID:	ZZZZZ	Batch ID:	R94368	TestNo:	EPA 218.6			Analysis Date:	7/30/2014	SeqNo:	1816309			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.018 0.060 0.01905 0 20

Sample ID	N013005-001AMS	SampType:	MS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94368			
Client ID:	ZZZZZ	Batch ID:	R94368	TestNo:	EPA 218.6			Analysis Date:	7/30/2014	SeqNo:	1816310			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.215 0.060 0.2000 0.01905 97.8 90 110

Sample ID	N013005-009AMS	SampType:	MS	TestCode:	218.6_W_LL	Units:	µg/L	Prep Date:		RunNo:	94368			
Client ID:	ZZZZZ	Batch ID:	R94368	TestNo:	EPA 218.6			Analysis Date:	7/30/2014	SeqNo:	1816312			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.213 0.060 0.2000 0.01606 98.2 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110				

Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110				

Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110				

Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110				

Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110				

Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110				

Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94287	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: PBW	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94287	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: LCSW	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.935	0.20	5.000	0	98.7	90	110				
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Sample ID N013005-006ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.355	0.20						1.346	0.607	20	
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Sample ID N013005-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.338	0.20	1.000	1.346	99.1	90	110				
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Sample ID N013005-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812990						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.290	0.20	1.000	2.321	96.9	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-007A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.291	0.20	1.000	2.321	97.0	90	110	3.290	0.0365	20	

Sample ID N013005-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812993						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.293	0.20	1.000	1.308	98.5	90	110				

Sample ID N013005-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812997						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.998	0.20	1.000	0	99.8	90	110				

Sample ID N013005-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1812999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				

Sample ID N013005-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
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Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.428	0.20	1.000	1.449	97.9	90	110				

Sample ID N013005-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.921	0.20	5.000	3.875	101	90	110				

Sample ID N013005-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.619	0.20	1.000	1.622	99.7	90	110				

Sample ID N013005-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.479	0.20	1.000	1.443	104	90	110				

Sample ID N013005-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.160	0.20	1.000	1.182	97.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013005-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.011	0.20	1.000	0	101	90	110				

Sample ID N013005-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813016						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.007	0.20	1.000	0	101	90	110				

Sample ID N013016-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813021						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.752	0.20	1.000	2.720	103	90	110				

Sample ID N013016-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813023						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.626	0.20	1.000	2.631	99.5	90	110				

Sample ID N013016-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813025						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.416	0.20	5.000	11.37	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813027						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.841	0.20	5.000	3.774	101	90	110				

Sample ID N013016-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813030						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.088	0.20	1.000	0.06710	102	90	110				

Sample ID N013016-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.456	0.20	1.000	2.444	101	90	110				

Sample ID N013016-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94287						
Client ID: ZZZZZZ	Batch ID: R94287	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813034						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.087	0.20	1.000	2.053	103	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID LCS-R94288	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: LCSW	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813044						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.907	0.20	5.000	0	98.1	90	110				

Sample ID MB-R94288	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: PBW	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID N013016-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813049						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.071	0.20	1.000	2.040	103	90	110				

Sample ID N013016-009ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813051						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.219	0.20						2.215	0.189	20	

Sample ID N013016-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813054						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.300	0.20	1.000	1.251	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-010A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813055						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.283	0.20	1.000	1.251	103	90	110	2.300	0.759	20	

Sample ID N013016-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813056						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.266	0.20	1.000	2.215	105	90	110				

Sample ID N013016-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/23/2014	SeqNo: 1813060						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.602	0.20	1.000	0.5604	104	90	110				

Sample ID N013016-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813062						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.425	0.20	5.000	4.389	101	90	110				

Sample ID N013016-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813064						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.449	0.20	5.000	4.385	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813066						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.632	0.20	5.000	3.466	103	90	110				

Sample ID N013016-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813070						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.813	0.20	1.000	1.772	104	90	110				

Sample ID N013016-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.651	0.20	1.000	2.614	104	90	110				

Sample ID N013016-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813074						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.457	0.20	1.000	1.380	108	90	110				

Sample ID N013016-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94288						
Client ID: ZZZZZZ	Batch ID: R94288	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813076						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.690	0.20	5.000	6.590	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94297	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: PBW	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813305						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94297	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: LCSW	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813306						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.021	0.20	5.000	0	100	90	110				
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Sample ID N013016-011ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813310						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.713	0.20						0.7201	1.06	20	
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Sample ID N013016-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.724	0.20	1.000	0.7201	100	90	110				
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Sample ID N013016-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.116	0.20	1.000	2.106	101	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013016-013A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.100	0.20	1.000	2.106	99.4	90	110	3.116	0.524	20	

Sample ID N013014-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813320						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID N013014-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0	100	90	110				

Sample ID N013014-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.034	0.20	1.000	0.01820	102	90	110				

Sample ID N013014-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.004	0.20	1.000	0	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013014-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.021	0.20	1.000	0	102	90	110				

Sample ID N013014-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID N013014-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0	101	90	110				

Sample ID N013014-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.033	0.20	1.000	0	103	90	110				

Sample ID N013014-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94297						
Client ID: ZZZZZZ	Batch ID: R94297	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813341						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.024	0.20	1.000	0	102	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID	N013014-012A-MS	SampType:	MS	TestCode:	218.6_WPGE	Units:	µg/L	Prep Date:	RunNo:	94297			
Client ID:	ZZZZZZ	Batch ID:	R94297	TestNo:	EPA 218.6	Analysis Date:	7/24/2014	SeqNo:	1813343				
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium		1.030		0.20	1.000	0.02120	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46145	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: PBW	Batch ID: 46145	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/31/2014	SeqNo: 1816812						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46145	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: LCSW	Batch ID: 46145	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/31/2014	SeqNo: 1816813						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.300 1.0 10.00 0 103 85 115

Sample ID N013015-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46145	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/31/2014	SeqNo: 1816817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.128 1.0 10.00 3.893 102 75 125

Sample ID N013015-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46145	TestNo: EPA 6020 EPA 3010A		Analysis Date: 7/31/2014	SeqNo: 1816818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.550 1.0 10.00 3.893 107 75 125 14.13 2.95 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46146	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: PBW	Batch ID: 46146	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816845						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46146	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: LCSW	Batch ID: 46146	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816846						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.749 1.0 10.00 0 97.5 85 115

Sample ID N013016-010B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46146	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.076 1.0 10.00 1.746 103 75 125

Sample ID N013016-010B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/24/2014	RunNo: 94377						
Client ID: ZZZZZZ	Batch ID: 46146	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816853						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.167 1.0 10.00 1.746 104 75 125 12.08 0.755 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-020

Client Sample ID: EX-15-059-Q3
Collection Date: 7/22/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	210	0.66	10		mg/L	20	7/24/2014 01:44 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	3.9	0.026	0.25		mg/L	5	7/23/2014 10:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-021

Client Sample ID: EX-16-059-Q3
Collection Date: 7/22/2014 10:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	150	0.66	10		mg/L	20	7/24/2014 02:21 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	2.2	0.010	0.10		mg/L	2	7/23/2014 10:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-022

Client Sample ID: EX-20-059-Q3
Collection Date: 7/22/2014 9:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	210	0.66	10		mg/L	20	7/24/2014 02:34 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	3.8	0.026	0.25		mg/L	5	7/23/2014 07:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-023

Client Sample ID: MW-967-059-Q3
Collection Date: 7/22/2014 9:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	220	0.66	10		mg/L	20	7/24/2014 02:47 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723A	QC Batch: R94294				PrepDate		Analyst: PS
Nitrate as N	3.8	0.026	0.25		mg/L	5	7/23/2014 01:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-024

Client Sample ID: EX-29-059-Q3
Collection Date: 7/22/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	220	0.66	10		mg/L	20	7/24/2014 02:59 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	7.3	0.051	0.50		mg/L	10	7/23/2014 07:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013016-025

Client Sample ID: EX-30-059-Q3
Collection Date: 7/22/2014 10:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Sulfate	300	0.66	10		mg/L	20	7/24/2014 03:12 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140723B	QC Batch: R94295				PrepDate		Analyst: PS
Nitrate as N	11	0.051	0.50		mg/L	10	7/23/2014 10:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94295_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: PBW	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID LCS-R94295_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: LCSW	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813494						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	5.014	0.50	5.000	0	100	90	110				

Sample ID N013014-004C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813513						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	149.460	10						151.4	1.29	20	

Sample ID N013014-005C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813514						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	133.860	10						133.7	0.105	20	

Sample ID N013014-004C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813515						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	248.780	10	100.0	151.4	97.4	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013014-004C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0	Analysis Date: 7/24/2014	SeqNo: 1813516							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	246.740	10	100.0	151.4	95.3	80	120	248.8	0.823	20	

Sample ID N013014-005C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0	Analysis Date: 7/24/2014	SeqNo: 1813517							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	233.880	10	100.0	133.7	100	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013014-007C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94294						
Client ID: ZZZZZZ	Batch ID: R94294	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813277						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.024	0.050						0.02100	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94295_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: PBW	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813451						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID LCS-R94295_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: LCSW	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.960 0.050 1.000 0 96.0 90 110

Sample ID N013016-022C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 3.865 0.25 3.845 0.519 20

Sample ID N013016-024C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813470						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 7.160 0.50 7.280 1.66 20

Sample ID N013016-022C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/23/2014	SeqNo: 1813473						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 8.550 0.25 5.000 3.845 94.1 80 120

Qualifiers:

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- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013016-022C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813474						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.750	0.25	5.000	3.845	98.1	80	120	8.550	2.31	20	

Sample ID N013016-024C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94295						
Client ID: ZZZZZZ	Batch ID: R94295	TestNo: EPA 300.0		Analysis Date: 7/24/2014	SeqNo: 1813475						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	16.600	0.50	10.00	7.280	93.2	80	120				

Qualifiers:


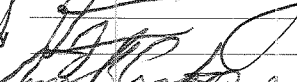
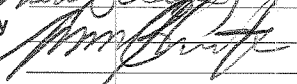
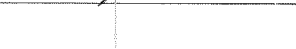
- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly 1000ml Poly 1000ml Poly	Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C 4°C 4°C	Filtered: Field Field Field NA	Holding Time (days): 28 180 2 7	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr Anions (E300.0) FF NO3N, SO4 TDS (SM2540C)	Number of Containers	COMMENTS		
SAMPLE ID	DATE	TIME	Matrix									
MW-41A-059-Q3	7/22/2014	1139	Water	X	X					NO13016-1	2	JM
MW-41B-059-Q3	7/22/2014	1058	Water	X	X						2	JM
MW-41S-059-Q3	7/22/2014	1007	Water	X	X						2	JM
MW-49S-059-Q3	7/22/2014	1242	Water	X	X						2	JM
MW-111D-059-Q3	7/22/2014	1325	Water	X	X						2	JD
MW-111S1-059-Q3	7/22/2014	1402	Water	X	X						2	JD
MW-111S2-059-Q3	7/22/2014	1431	Water	X	X						2	JD
MW-980-059-Q3	7/22/2014	1441	Water	X	X						2	JD
MW-126S1-059-Q3	7/22/2014	1013	Water	X	X						2	JD
MW-126S2-059-Q3	7/22/2014	0938	Water	X	X						2	JD
MW-129S-059-Q3	7/22/2014	0849	Water	X	X						2	JD
MW-107D-059-Q3	7/22/2014	1057	Water	X	X						2	SD
MW-107S-059-Q3	7/22/2014	1148	Water	X	X						2	SD
MW-128S1-059-Q3	7/22/2014	1351	Water	X	X						2	SD
MW-984-059-Q3	7/22/2014	1401	Water	X	X						2	SD
MW-128S2-059-Q3	7/22/2014	1443	Water	X	X						2	SD
MW-128S3-059-Q3	7/22/2014	1527	Water	X	X						2	SD

Approved by:  Sampled by:  Relinquished by:  Received by: 	Signatures Date/Time 7/22/14 1635 7/22/14 1635 7/22/14 1635 7/22/14 @1640 7/22/14 @2030	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 4.1, 1.8, 2.0 Airbill No: 1R#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Harvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly 500 ml Poly 1000ml Poly 1000ml Poly	Preservatives: (NH4)2SO4, NH4, OH, 4°C HNO3, 4°C 4°C 4°C	Filtered: Field Field Field NA	Holding Time (days): 28 180 2 7	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr Anions (E300.0) FF NO3, SO4 TDS (SM2540C)	Number of Containers	COMMENTS		
SAMPLE ID	DATE	TIME	Matrix									
DW-01-059-Q3	7/22/2014	0858	Water	X	X					NO13016-18	2	MD
DW-03-059-Q3	7/22/2014	1327	Water	X	X					-19	2	TH
EX-15-059-Q3	7/22/2014	0901	Water	X	X	X	X			-20	4	TH
EX-16-059-Q3	7/22/2014	1006	Water	X	X	X	X			-21	4	TH
EX-20-059-Q3	7/22/2014	0946	Water	X	X	X	X			-22	4	TH
MW-967-059-Q3	7/22/2014	0956	Water	X	X	X	X			-23	4	TH
EX-29-059-Q3	7/22/2014	1046	Water	X	X	X	X			-24	4	TH
EX-30-059-Q3	7/22/2014	1026	Water	X	X	X	X			-25	4	TH
TOTAL NUMBER OF CONTAINERS											62	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 07/22/14 1635 07/22/14 1635 07/22/14 1635 7/22/14 1640 7/22/14 2038	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / <input type="radio"/> no 4.1, 1.8, 2.0 Airbill No: 1R.#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/22/2014 Workorder: N013016
 Rep sample Temp (Deg C): 4.1/1.8/2.0 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 7/23/2014

Reviewed By:

[Signature] 07/28/14

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013016-020D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.4410-61.3575)*1000000}{100}$$

835 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 840 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/28/2014								TDS/CONDUCTIVITY
Date Finished: 7/29/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46190	100	64.1075	64.1075	0	1	0.00		
LCS-46190	100	63.5093	63.6039	946	1	946.00		
N013015-007D	100	63.9712	64.0044	332	1	332.00	492	0.67
N013015-007D-DUP	100	63.9919	64.0245	326	1	326.00	492	0.66
N013015-008D	100	64.2722	64.3467	745	1	745.00	1101	0.68
N013015-009D	40	62.9935	63.1085	1150	2.5	2875.00	3620	0.79
N013015-010D	100	63.7768	63.8819	1051	1	1051.00	1685	0.62
N013015-011D	30	63.7968	63.9008	1040	3.3333333	3466.67	4350	0.80
N013016-020D	100	61.3575	61.441	835	1	835.00	1182	0.71
N013016-021D	100	60.6311	60.6932	621	1	621.00	908	0.68
N013016-022D	100	60.9807	61.0626	819	1	819.00	1195	0.69
N013016-023D	100	60.7668	60.8494	826	1	826.00	1185	0.70
N013016-024D	100	60.8324	60.9204	880	1	880.00	1314	0.67
N013016-025D	100	61.7261	61.8437	1176	1	1176.00	1674	0.70
N013054-001C	100	60.5305	60.5793	488	1	488.00	771	0.63
N013055-003D	100	61.1315	61.2384	1069	1	1069.00	1552	0.69
N013055-004D	100	64.2518	64.3864	1346	1	1346.00	1855	0.73
N013055-005D	100	59.9055	60.0248	1193	1	1193.00	1700	0.70
N013055-007D	100	61.0168	61.0987	819	1	819.00	1243	0.66

JML
7/29/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013016-005A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.018146 * 1 \\ &= 0.018146\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Nancy 8/5/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013016-025A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 8.1889 * 5 \\ &= 40.9445\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 41$$

 8/6/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013016-023C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.764 * 5 \\ &= 3.82 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 3.8$$

Murray 8/5/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013016-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 2.88842382145906 * 1 * (25/25) \\ &= 2.88842382145906 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 2.9$$

 8/6/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013016
Test Method: EPA 6020
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46145

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013015-001B-DT 5X	Chromium	µg/L	3.905195687	NA	3.892973729	0.31%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013016
Test Method: EPA 6020
Analysis Date: 7/31/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46146

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013016-010B-DT 5X	Chromium	µg/L	1.753865316	NA	1.745577752	0.47%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013015-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94377						
Client ID: ZZZZZ	Batch ID: 46145	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816816						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	25.674	2.0	20.00	3.893	109	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013016
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013016-010B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94377						
Client ID: ZZZZZ	Batch ID: 46146	TestNo: EPA 6020	EPA 3010A	Analysis Date: 7/31/2014	SeqNo: 1816851						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.343	2.0	20.00	1.746	98.0	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

August 13, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.:2676
NV Cert. No.:NV-00922

Workorder No.: N013028

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 23, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET Laboratories

Date: 13-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013028

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (5.929 ug/L) and hexavalent chromium (4.465 ug/L) for sample N013028-046 (MW-97S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 6.163 and 5.564 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 07-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013028
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013028-001A	MW-862-059-Q3	Water	7/23/2014 3:45:00 PM	7/23/2014	8/7/2014
N013028-002A	MW-95D-059-Q3	Water	7/23/2014 1:12:00 PM	7/23/2014	8/7/2014
N013028-002B	MW-95D-059-Q3	Water	7/23/2014 1:12:00 PM	7/23/2014	8/7/2014
N013028-003A	MW-95S-059-Q3	Water	7/23/2014 1:56:00 PM	7/23/2014	8/7/2014
N013028-003B	MW-95S-059-Q3	Water	7/23/2014 1:56:00 PM	7/23/2014	8/7/2014
N013028-004A	MW-102D-059-Q3	Water	7/23/2014 10:53:00 AM	7/23/2014	8/7/2014
N013028-004B	MW-102D-059-Q3	Water	7/23/2014 10:53:00 AM	7/23/2014	8/7/2014
N013028-005A	MW-102S-059-Q3	Water	7/23/2014 11:43:00 AM	7/23/2014	8/7/2014
N013028-005B	MW-102S-059-Q3	Water	7/23/2014 11:43:00 AM	7/23/2014	8/7/2014
N013028-006A	MW-108D-059-Q3	Water	7/23/2014 9:15:00 AM	7/23/2014	8/7/2014
N013028-006B	MW-108D-059-Q3	Water	7/23/2014 9:15:00 AM	7/23/2014	8/7/2014
N013028-007A	MW-108S-059-Q3	Water	7/23/2014 8:38:00 AM	7/23/2014	8/7/2014
N013028-007B	MW-108S-059-Q3	Water	7/23/2014 8:38:00 AM	7/23/2014	8/7/2014
N013028-008A	MW-109-059-Q3	Water	7/23/2014 10:00:00 AM	7/23/2014	8/7/2014
N013028-008B	MW-109-059-Q3	Water	7/23/2014 10:00:00 AM	7/23/2014	8/7/2014
N013028-009A	MW-856-059-Q3	Water	7/23/2014 2:25:00 PM	7/23/2014	8/7/2014
N013028-010A	MW-125S1-059-Q3	Water	7/23/2014 1:25:00 PM	7/23/2014	8/7/2014
N013028-010B	MW-125S1-059-Q3	Water	7/23/2014 1:25:00 PM	7/23/2014	8/7/2014
N013028-011A	MW-983-059-Q3	Water	7/23/2014 1:35:00 PM	7/23/2014	8/7/2014
N013028-011B	MW-983-059-Q3	Water	7/23/2014 1:35:00 PM	7/23/2014	8/7/2014
N013028-012A	MW-125S2-059-Q3	Water	7/23/2014 2:10:00 PM	7/23/2014	8/7/2014
N013028-012B	MW-125S2-059-Q3	Water	7/23/2014 2:10:00 PM	7/23/2014	8/7/2014
N013028-013A	MW-140S1-059-Q3	Water	7/23/2014 8:39:00 AM	7/23/2014	8/7/2014
N013028-013B	MW-140S1-059-Q3	Water	7/23/2014 8:39:00 AM	7/23/2014	8/7/2014
N013028-014A	MW-140S2-059-Q3	Water	7/23/2014 9:15:00 AM	7/23/2014	8/7/2014
N013028-014B	MW-140S2-059-Q3	Water	7/23/2014 9:15:00 AM	7/23/2014	8/7/2014
N013028-015A	MW-140S3-059-Q3	Water	7/23/2014 9:51:00 AM	7/23/2014	8/7/2014
N013028-015B	MW-140S3-059-Q3	Water	7/23/2014 9:51:00 AM	7/23/2014	8/7/2014
N013028-016A	MW-141D-059-Q3	Water	7/23/2014 12:17:00 PM	7/23/2014	8/7/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013028
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013028-016B	MW-141D-059-Q3	Water	7/23/2014 12:17:00 PM	7/23/2014	8/7/2014
N013028-017A	MW-141S1-059-Q3	Water	7/23/2014 11:02:00 AM	7/23/2014	8/7/2014
N013028-017B	MW-141S1-059-Q3	Water	7/23/2014 11:02:00 AM	7/23/2014	8/7/2014
N013028-018A	MW-141S2-059-Q3	Water	7/23/2014 11:41:00 AM	7/23/2014	8/7/2014
N013028-018B	MW-141S2-059-Q3	Water	7/23/2014 11:41:00 AM	7/23/2014	8/7/2014
N013028-019A	MW-857-059-Q3	Water	7/23/2014 2:40:00 PM	7/23/2014	8/7/2014
N013028-020A	MW-32B2-059-Q3	Water	7/23/2014 9:11:00 AM	7/23/2014	8/7/2014
N013028-020B	MW-32B2-059-Q3	Water	7/23/2014 9:11:00 AM	7/23/2014	8/7/2014
N013028-021A	MW-34-059-Q3	Water	7/23/2014 1:15:00 PM	7/23/2014	8/7/2014
N013028-021B	MW-34-059-Q3	Water	7/23/2014 1:15:00 PM	7/23/2014	8/7/2014
N013028-022A	MW-972-059-Q3	Water	7/23/2014 1:25:00 PM	7/23/2014	8/7/2014
N013028-022B	MW-972-059-Q3	Water	7/23/2014 1:25:00 PM	7/23/2014	8/7/2014
N013028-023A	MW-858-059-Q3	Water	7/23/2014 2:15:00 PM	7/23/2014	8/7/2014
N013028-024A	MW-50A-059-Q3	Water	7/23/2014 3:27:00 PM	7/23/2014	8/7/2014
N013028-024B	MW-50A-059-Q3	Water	7/23/2014 3:27:00 PM	7/23/2014	8/7/2014
N013028-025A	MW-50B-059-Q3	Water	7/23/2014 3:36:00 PM	7/23/2014	8/7/2014
N013028-025B	MW-50B-059-Q3	Water	7/23/2014 3:36:00 PM	7/23/2014	8/7/2014
N013028-026A	MW-50S-059-Q3	Water	7/23/2014 3:57:00 PM	7/23/2014	8/7/2014
N013028-026B	MW-50S-059-Q3	Water	7/23/2014 3:57:00 PM	7/23/2014	8/7/2014
N013028-027A	MW-55B-059-Q3	Water	7/23/2014 11:57:00 AM	7/23/2014	8/7/2014
N013028-027B	MW-55B-059-Q3	Water	7/23/2014 11:57:00 AM	7/23/2014	8/7/2014
N013028-028A	MW-974-059-Q3	Water	7/23/2014 11:58:00 AM	7/23/2014	8/7/2014
N013028-028B	MW-974-059-Q3	Water	7/23/2014 11:58:00 AM	7/23/2014	8/7/2014
N013028-029A	MW-55C-059-Q3	Water	7/23/2014 1:51:00 PM	7/23/2014	8/7/2014
N013028-029B	MW-55C-059-Q3	Water	7/23/2014 1:51:00 PM	7/23/2014	8/7/2014
N013028-030A	MW-859-059-Q3	Water	7/23/2014 4:30:00 PM	7/23/2014	8/7/2014
N013028-031A	MW-156S-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/7/2014
N013028-031B	MW-156S-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/7/2014
N013028-032A	MW-157S-059-Q3	Water	7/23/2014 3:40:00 PM	7/23/2014	8/7/2014
N013028-032B	MW-157S-059-Q3	Water	7/23/2014 3:40:00 PM	7/23/2014	8/7/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013028
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013028-033A	MW-171D1-059-Q3	Water	7/23/2014 10:26:00 AM	7/23/2014	8/7/2014
N013028-033B	MW-171D1-059-Q3	Water	7/23/2014 10:26:00 AM	7/23/2014	8/7/2014
N013028-034A	MW-171D2-059-Q3	Water	7/23/2014 8:53:00 AM	7/23/2014	8/7/2014
N013028-034B	MW-171D2-059-Q3	Water	7/23/2014 8:53:00 AM	7/23/2014	8/7/2014
N013028-035A	MW-171S-059-Q3	Water	7/23/2014 11:03:00 AM	7/23/2014	8/7/2014
N013028-035B	MW-171S-059-Q3	Water	7/23/2014 11:03:00 AM	7/23/2014	8/7/2014
N013028-036A	MW-172S1-059-Q3	Water	7/23/2014 11:39:00 AM	7/23/2014	8/7/2014
N013028-036B	MW-172S1-059-Q3	Water	7/23/2014 11:39:00 AM	7/23/2014	8/7/2014
N013028-037A	MW-172S2-059-Q3	Water	7/23/2014 12:43:00 PM	7/23/2014	8/7/2014
N013028-037B	MW-172S2-059-Q3	Water	7/23/2014 12:43:00 PM	7/23/2014	8/7/2014
N013028-038A	MW-861-059-Q3	Water	7/23/2014 8:42:00 AM	7/23/2014	8/7/2014
N013028-039A	MW-87D-059-Q3	Water	7/23/2014 9:11:00 AM	7/23/2014	8/7/2014
N013028-039B	MW-87D-059-Q3	Water	7/23/2014 9:11:00 AM	7/23/2014	8/7/2014
N013028-040A	MW-87S-059-Q3	Water	7/23/2014 8:31:00 AM	7/23/2014	8/7/2014
N013028-040B	MW-87S-059-Q3	Water	7/23/2014 8:31:00 AM	7/23/2014	8/7/2014
N013028-041A	MW-91C-059-Q3	Water	7/23/2014 2:30:00 PM	7/23/2014	8/7/2014
N013028-041B	MW-91C-059-Q3	Water	7/23/2014 2:30:00 PM	7/23/2014	8/7/2014
N013028-042A	MW-92C-059-Q3	Water	7/23/2014 1:51:00 PM	7/23/2014	8/7/2014
N013028-042B	MW-92C-059-Q3	Water	7/23/2014 1:51:00 PM	7/23/2014	8/7/2014
N013028-043A	MW-94D-059-Q3	Water	7/23/2014 10:37:00 AM	7/23/2014	8/7/2014
N013028-043B	MW-94D-059-Q3	Water	7/23/2014 10:37:00 AM	7/23/2014	8/7/2014
N013028-044A	MW-94S-059-Q3	Water	7/23/2014 9:51:00 AM	7/23/2014	8/7/2014
N013028-044B	MW-94S-059-Q3	Water	7/23/2014 9:51:00 AM	7/23/2014	8/7/2014
N013028-045A	MW-97D-059-Q3	Water	7/23/2014 12:04:00 PM	7/23/2014	8/7/2014
N013028-045B	MW-97D-059-Q3	Water	7/23/2014 12:04:00 PM	7/23/2014	8/7/2014
N013028-046A	MW-97S-059-Q3	Water	7/23/2014 11:21:00 AM	7/23/2014	8/7/2014
N013028-046B	MW-97S-059-Q3	Water	7/23/2014 11:21:00 AM	7/23/2014	8/7/2014
N013028-047A	MW-98C-059-Q3	Water	7/23/2014 12:46:00 PM	7/23/2014	8/7/2014
N013028-047B	MW-98C-059-Q3	Water	7/23/2014 12:46:00 PM	7/23/2014	8/7/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-001

Client Sample ID: MW-862-059-Q3
Collection Date: 7/23/2014 3:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 07:25 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 04:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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www.assetlaboratories.com

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-95D-059-Q3
Lab Order: N013028	Collection Date: 7/23/2014 1:12:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013028-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	0.40	0.016	0.20		µg/L	1	7/24/2014 04:48 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 11:36 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-003

Client Sample ID: MW-95S-059-Q3
Collection Date: 7/23/2014 1:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	8.6	0.016	0.20		µg/L	1	7/24/2014 05:08 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	8.3	0.030	1.0		µg/L	1	8/1/2014 12:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET LABORATORIES
 ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-004

Client Sample ID: MW-102D-059-Q3
Collection Date: 7/23/2014 10:53:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/24/2014 05:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	8/1/2014 12:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-102S-059-Q3
Lab Order: N013028	Collection Date: 7/23/2014 11:43:00 AM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013028-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/24/2014 06:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/1/2014 12:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-006

Client Sample ID: MW-108D-059-Q3
Collection Date: 7/23/2014 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	35	0.080	1.0		µg/L	5	7/24/2014 05:48 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	35	0.030	1.0		µg/L	1	8/1/2014 12:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-007

Client Sample ID: MW-108S-059-Q3
Collection Date: 7/23/2014 8:38:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	41	0.080	1.0		µg/L	5	7/24/2014 06:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	39	0.030	1.0		µg/L	1	8/1/2014 12:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-008

Client Sample ID: MW-109-059-Q3
Collection Date: 7/23/2014 10:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	13	0.016	0.20		µg/L	1	7/24/2014 08:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	12	0.030	1.0		µg/L	1	8/1/2014 01:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-856-059-Q3
Lab Order: N013028	Collection Date: 7/23/2014 2:25:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013028-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/30/2014 07:54 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 07:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-010

Client Sample ID: MW-125S1-059-Q3
Collection Date: 7/23/2014 1:25:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/24/2014 07:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.5	0.030	1.0		µg/L	1	8/1/2014 01:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-011

Client Sample ID: MW-983-059-Q3
Collection Date: 7/23/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/24/2014 07:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.3	0.030	1.0		µg/L	1	8/1/2014 01:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-012

Client Sample ID: MW-125S2-059-Q3
Collection Date: 7/23/2014 2:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/25/2014 12:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	8/1/2014 01:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-013

Client Sample ID: MW-140S1-059-Q3
Collection Date: 7/23/2014 8:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	4.7	0.016	0.20		µg/L	1	7/25/2014 12:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	4.8	0.030	1.0		µg/L	1	8/1/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-014

Client Sample ID: MW-140S2-059-Q3
Collection Date: 7/23/2014 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	4.0	0.016	0.20		µg/L	1	7/25/2014 01:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	4.2	0.030	1.0		µg/L	1	8/2/2014 08:47 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-015

Client Sample ID: MW-140S3-059-Q3
Collection Date: 7/23/2014 9:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	3.5	0.016	0.20		µg/L	1	7/25/2014 02:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.5	0.030	1.0		µg/L	1	8/1/2014 05:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-016

Client Sample ID: MW-141D-059-Q3
Collection Date: 7/23/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	0.070	0.012	0.060		µg/L	1	7/30/2014 08:14 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 04:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 01:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-017

Client Sample ID: MW-141S1-059-Q3
Collection Date: 7/23/2014 11:02:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/25/2014 02:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/1/2014 01:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-018

Client Sample ID: MW-141S2-059-Q3
Collection Date: 7/23/2014 11:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	4.0	0.016	0.20		µg/L	1	7/25/2014 03:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	4.5	0.030	1.0		µg/L	1	8/1/2014 02:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-019

Client Sample ID: MW-857-059-Q3
Collection Date: 7/23/2014 2:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 12:21 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 03:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-020

Client Sample ID: MW-32B2-059-Q3
Collection Date: 7/23/2014 9:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	7.0	0.016	0.20		µg/L	1	7/25/2014 04:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	7.4	0.030	1.0		µg/L	1	8/1/2014 02:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-021

Client Sample ID: MW-34-059-Q3
Collection Date: 7/23/2014 1:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140730A	QC Batch: R94368				PrepDate		Analyst: RB
Hexavalent Chromium	0.16	0.012	0.060		µg/L	1	7/30/2014 09:17 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 04:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-022

Client Sample ID: MW-972-059-Q3
Collection Date: 7/23/2014 1:25:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	0.15	0.012	0.060		µg/L	1	7/31/2014 11:18 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 05:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-023

Client Sample ID: MW-858-059-Q3
Collection Date: 7/23/2014 2:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 11:49 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 08:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-024

Client Sample ID: MW-50A-059-Q3
Collection Date: 7/23/2014 3:27:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	3.3	0.016	0.20		µg/L	1	7/25/2014 06:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46161				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.9	0.030	1.0		µg/L	1	8/1/2014 02:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-025

Client Sample ID: MW-50B-059-Q3
Collection Date: 7/23/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/25/2014 06:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	8/1/2014 02:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-026

Client Sample ID: MW-50S-059-Q3
Collection Date: 7/23/2014 3:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	14	0.016	0.20		µg/L	1	7/25/2014 07:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	14	0.030	1.0		µg/L	1	8/1/2014 03:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-027

Client Sample ID: MW-55B-059-Q3
Collection Date: 7/23/2014 11:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 01:02 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 07:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 03:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-028

Client Sample ID: MW-974-059-Q3
Collection Date: 7/23/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140806A	QC Batch: R94449				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/6/2014 06:08 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 08:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 03:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-029

Client Sample ID: MW-55C-059-Q3
Collection Date: 7/23/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 01:23 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 08:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 03:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-030

Client Sample ID: MW-859-059-Q3
Collection Date: 7/23/2014 4:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 01:44 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 09:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-031

Client Sample ID: MW-156S-059-Q3
Collection Date: 7/23/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140725A	QC Batch: R94328				PrepDate		Analyst: QBM
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	7/25/2014 09:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	8/1/2014 03:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-032

Client Sample ID: MW-157S-059-Q3
Collection Date: 7/23/2014 3:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	7/25/2014 01:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	8/1/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-033

Client Sample ID: MW-171D1-059-Q3
Collection Date: 7/23/2014 10:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 02:05 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 02:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-034

Client Sample ID: MW-171D2-059-Q3
Collection Date: 7/23/2014 8:53:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 02:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 02:48 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 04:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-035

Client Sample ID: MW-171S-059-Q3
Collection Date: 7/23/2014 11:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	7/25/2014 03:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	8/1/2014 04:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-036

Client Sample ID: MW-172S1-059-Q3
Collection Date: 7/23/2014 11:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/25/2014 03:48 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	8/1/2014 04:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-037

Client Sample ID: MW-172S2-059-Q3
Collection Date: 7/23/2014 12:43:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	0.59	0.016	0.20		µg/L	1	7/25/2014 04:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	8/1/2014 04:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-038

Client Sample ID: MW-861-059-Q3
Collection Date: 7/23/2014 8:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 03:07 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 04:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-039

Client Sample ID: MW-87D-059-Q3
Collection Date: 7/23/2014 9:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/25/2014 04:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	8/1/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-040

Client Sample ID: MW-87S-059-Q3
Collection Date: 7/23/2014 8:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/25/2014 05:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	8/1/2014 04:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-91C-059-Q3
Lab Order: N013028	Collection Date: 7/23/2014 2:30:00 PM
Project: PGE Hinkley, 492581.UR.SW.FW	Matrix: WATER
Lab ID: N013028-041	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 03:28 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 06:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 04:43 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 13-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-042

Client Sample ID: MW-92C-059-Q3
Collection Date: 7/23/2014 1:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: IC7_140725A	QC Batch: R94329			PrepDate:	Analyst: QBM		
Hexavalent Chromium	24	0.032	0.40	µg/L	2	7/25/2014 06:03 PM	
DISSOLVED METALS BY ICP-MS							
				EPA 6020			
RunID: ICP7_140801A	QC Batch: 46162			PrepDate: 7/25/2014	Analyst: CEI		
Chromium	25	0.030	1.0	µg/L	1	8/1/2014 05:16 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-043

Client Sample ID: MW-94D-059-Q3
Collection Date: 7/23/2014 10:37:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	3.2	0.016	0.20		µg/L	1	7/25/2014 06:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.6	0.030	1.0		µg/L	1	8/1/2014 05:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-044

Client Sample ID: MW-94S-059-Q3
Collection Date: 7/23/2014 9:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	6.5	0.016	0.20		µg/L	1	7/25/2014 06:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	6.9	0.030	1.0		µg/L	1	8/1/2014 05:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-045

Client Sample ID: MW-97D-059-Q3
Collection Date: 7/23/2014 12:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/25/2014 07:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	8/1/2014 05:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-046

Client Sample ID: MW-97S-059-Q3
Collection Date: 7/23/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	4.5	0.016	0.20		µg/L	1	7/25/2014 07:38 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46162				PrepDate	7/25/2014	Analyst: CEI
Chromium	5.9	0.030	1.0		µg/L	1	8/1/2014 05:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013028-047

Client Sample ID: MW-98C-059-Q3
Collection Date: 7/23/2014 12:46:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	0.20	0.012	0.060		µg/L	1	7/31/2014 03:49 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 07:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 06:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94368	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: PBW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816306						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.060									

Sample ID LCS-R94368	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: LCSW	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.060	0.2000	0	98.0	90	110				

Sample ID N013005-001ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816309						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.018	0.060						0.01905	0	20	

Sample ID N013005-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816310						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01905	97.8	90	110				

Sample ID N013005-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01606	98.2	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013005-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816313						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.01606	100	90	110	0.2125	1.96	20	

Sample ID N013005-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816315						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.060	0.2000	0	101	90	110				

Sample ID N013005-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01219	92.7	90	110				

Sample ID N013005-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013005-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816323						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	98.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013006-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01434	99.7	90	110				

Sample ID N013014-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.205	0.060	0.2000	0	103	90	110				

Sample ID N013014-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01372	98.1	90	110				

Sample ID N013014-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02107	99.0	90	110				

Sample ID N013014-010AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013014-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0	107	90	110				

Sample ID N013014-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.02227	99.8	90	110				

Sample ID N013015-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.220	0.060	0.2000	0.02736	96.3	90	110				

Sample ID N013016-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01815	98.3	90	110				

Sample ID N013028-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.218	0.060	0.2000	0.01565	101	90	110
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Sample ID N013028-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.265	0.060	0.2000	0.07032	97.3	90	110
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Sample ID N013028-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94368						
Client ID: ZZZZZZ	Batch ID: R94368	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1816355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.363	0.060	0.2000	0.1584	102	90	110
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94397	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: PBW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94397	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: LCSW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.194 0.060 0.2000 0 96.9 90 110

Sample ID N013028-022ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.143 0.060 0.1479 3.11 20

Sample ID N013028-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.337 0.060 0.2000 0.1479 94.5 90 110

Sample ID N013028-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.213 0.060 0.2000 0.01684 98.3 90 110

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-023AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01684	92.8	90	110	0.2134	5.23	20	

Sample ID N013028-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01815	95.6	90	110				

Sample ID N013028-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01733	101	90	110				

Sample ID N013028-029AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02003	99.2	90	110				

Sample ID N013028-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02410	96.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-033AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.241	0.060	0.2000	0.03798	101	90	110				

Sample ID N013028-034AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02974	95.7	90	110				

Sample ID N013028-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.01910	102	90	110				

Sample ID N013028-041AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0	104	90	110				

Sample ID N013028-047AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.399	0.060	0.2000	0.2034	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013029-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02072	98.5	90	110				

Sample ID N013039-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.02258	95.3	90	110				

Sample ID N013039-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02483	98.0	90	110				

Sample ID N013039-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818357						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01677	98.5	90	110				

Sample ID N013039-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01595	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013039-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01620	91.1	90	110				

Sample ID N013039-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0.01824	94.9	90	110				

Sample ID N013039-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01458	99.9	90	110				

Sample ID N013039-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.263	0.060	0.2000	0.07000	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94449	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94449						
Client ID: PBW	Batch ID: R94449	TestNo: EPA 218.6		Analysis Date: 8/6/2014	SeqNo: 1820233						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94449	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94449						
Client ID: LCSW	Batch ID: R94449	TestNo: EPA 218.6		Analysis Date: 8/6/2014	SeqNo: 1820234						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.198 0.060 0.2000 0 99.2 90 110

Sample ID N013028-028ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94449						
Client ID: ZZZZZ	Batch ID: R94449	TestNo: EPA 218.6		Analysis Date: 8/6/2014	SeqNo: 1820236						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.047 0.060 0.04840 0 20

Sample ID N013028-028AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94449						
Client ID: ZZZZZ	Batch ID: R94449	TestNo: EPA 218.6		Analysis Date: 8/6/2014	SeqNo: 1820237						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.236 0.060 0.2000 0.04840 93.6 90 110

Sample ID N013028-028AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94449						
Client ID: ZZZZZ	Batch ID: R94449	TestNo: EPA 218.6		Analysis Date: 8/6/2014	SeqNo: 1820238						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.252 0.060 0.2000 0.04840 102 90 110 0.2356 6.90 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94316	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: PBW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94316	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: LCSW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.109	0.20	5.000	0	102	90	110				
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Sample ID N013015-005A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813967						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.052	0.20						2.089	1.77	20	
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Sample ID N013015-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.063	0.20	1.000	2.089	97.5	90	110				
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Sample ID N013015-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.252	0.20	1.000	0.2289	102	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-010A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.205	0.20	1.000	0.2289	97.6	90	110	1.252	3.90	20	

Sample ID N013029-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.558	0.20	5.000	3.358	104	90	110				

Sample ID N013029-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.623	0.20	5.000	3.436	104	90	110				

Sample ID N013029-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.072	0.20	1.000	0	107	90	110				

Sample ID N013029-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.739	0.20	1.000	2.734	101	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013029-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.907	0.20	5.000	6.788	102	90	110				

Sample ID N013029-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.297	0.20	5.000	5.116	104	90	110				

Sample ID N013028-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813990						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Sample ID N013028-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.472	0.20	1.000	0.4012	107	90	110				

Sample ID N013028-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.653	0.20	5.000	8.606	101	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813996						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.740	0.20	1.000	2.750	99.0	90	110				

Sample ID N013028-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.389	0.20	1.000	1.355	103	90	110				

Sample ID N013028-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.265	0.20	1.000	2.222	104	90	110				

Sample ID N013028-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.264	0.20	1.000	2.257	101	90	110				

Sample ID N013028-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94328	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: PBW	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94328	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: LCSW	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814269						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.153	0.20	5.000	0	103	90	110				
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Sample ID N013028-012A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814271						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.535	0.20						1.587	3.34	20	
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Sample ID N013028-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.551	0.20	1.000	1.587	96.4	90	110				
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Sample ID N013028-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814274						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.825	0.20	5.000	4.684	103	90	110				
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-013A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814275						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.836	0.20	5.000	4.684	103	90	110	9.825	0.120	20	

Sample ID N013028-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.585	0.20	5.000	3.459	103	90	110				

Sample ID N013028-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.162	0.20	1.000	0.1732	98.9	90	110				

Sample ID N013028-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.452	0.20	5.000	3.378	101	90	110				

Sample ID N013028-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814285						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.237	0.20	5.000	4.027	104	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.138	0.20	5.000	3.976	103	90	110
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Sample ID N013028-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814291						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.052	0.20	1.000	0.04980	100	90	110
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Sample ID N013028-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814293						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	12.234	0.20	5.000	7.028	104	90	110
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Sample ID N013028-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814295						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.146	0.20	1.000	0.1107	104	90	110
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Sample ID N013028-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814296						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.139	0.20	1.000	0.1123	103	90	110
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814300						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.048	0.20	1.000	0	105	90	110				

Sample ID N013028-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814302						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.527	0.20	5.000	3.293	105	90	110				

Sample ID N013028-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814304						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.592	0.20	1.000	2.587	101	90	110				

Sample ID N013028-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.181	0.20	1.000	0.09700	108	90	110				

Sample ID N013028-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.265	0.20	1.000	0.1981	107	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814314						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.153	0.20	1.000	0.1425	101	90	110				

Sample ID N013028-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814316						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.070	0.20	1.000	0.04220	103	90	110				

Sample ID N013028-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94328						
Client ID: ZZZZZZ	Batch ID: R94328	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.477	0.20	1.000	1.464	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94329	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: PBW	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94329	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: LCSW	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.906	0.20	5.000	0	98.1	90	110				
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Sample ID N013028-032ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.749	0.20						1.758	0.525	20	
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Sample ID N013028-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814328						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.699	0.20	1.000	1.758	94.1	90	110				
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Sample ID N013028-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.026	0.20	1.000	0.05140	97.5	90	110				
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-033A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0.05140	96.6	90	110	1.026	0.871	20	

Sample ID N013028-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0.02390	97.9	90	110				

Sample ID N013028-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.275	0.20	1.000	2.295	98.0	90	110				

Sample ID N013028-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.573	0.20	1.000	2.582	99.1	90	110				

Sample ID N013028-037A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814341						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.578	0.20	1.000	0.5912	98.7	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110
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Sample ID N013028-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.772	0.20	5.000	2.804	99.4	90	110
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Sample ID N013028-040A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.749	0.20	5.000	2.758	99.8	90	110
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Sample ID N013028-041A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814350						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110
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Sample ID N013028-043A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814353						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.244	0.20	5.000	3.169	101	90	110
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-044A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.561	0.20	5.000	6.528	101	90	110				

Sample ID N013028-045A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.177	0.20	1.000	1.159	102	90	110				

Sample ID N013028-046A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.517	0.20	5.000	4.465	101	90	110				

Sample ID N013028-047A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.192	0.20	1.000	0.1993	99.3	90	110				

Sample ID N013039-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1814368							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0.02590	98.8	90	110				

Sample ID N013039-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1814372							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.565	0.20	5.000	3.425	103	90	110				

Sample ID N013039-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6	Analysis Date: 7/25/2014	SeqNo: 1814374							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.068	0.20	1.000	3.117	95.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46161	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: PBW	Batch ID: 46161	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817749						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46161	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: LCSW	Batch ID: 46161	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817750						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.065 1.0 10.00 0 101 85 115

Sample ID N013028-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46161	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817754						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.678 1.0 10.00 0.6842 99.9 75 125

Sample ID N013028-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46161	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817755						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.646 1.0 10.00 0.6842 99.6 75 125 10.68 0.306 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46162	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: PBW	Batch ID: 46162	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817783						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46162	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: LCSW	Batch ID: 46162	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817786						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.938 1.0 10.00 0 109 85 115

Sample ID N013028-025B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46162	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817790						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.017 1.0 10.00 2.728 103 75 125

Sample ID N013028-025B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46162	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.773 1.0 10.00 2.728 100 75 125 13.02 1.89 20

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46163	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: PBW	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46163	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: LCSW	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817821						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.005 1.0 10.00 0 100 85 115

Sample ID N013028-047B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.950 1.0 10.00 0.3585 95.9 75 125

Sample ID N013028-047B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.879 1.0 10.00 0.3585 95.2 75 125 9.950 0.726 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name	PGE Hinkley	Container:	250 ml Poly	500 ml Poly	
Location	Hinkley	Preservatives:	(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	
Project Number	492581.UR.SW.FW	Filtered:	Field	Field	
Project Manager	Jennifer Low	Holding Time (days):	28	180	
Sample Manager	Jim Hanvey		Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	
Cell Number	(404) 229-2181				
Fax Number	(510) 622-9136				
Task Order	59				
Project	2014-GMP-059-Q3				
Turnaround Time	10 Days				
Shipping Date:					
COC Number:					

SAMPLE ID	DATE	TIME	Matrix			Number of Containers	COMMENTS
MW-862-059-Q3	7/23/2014	1545	Water	X		1	JM
MW-95D-059-Q3	7/23/2014	1312	Water	X	X	2	JM
MW-95S-059-Q3	7/23/2014	1356	Water	X	X	2	JM
MW-102D-059-Q3	7/23/2014	1053	Water	X	X	2	JM
MW-102S-059-Q3	7/23/2014	1143	Water	X	X	2	JM
MW-108D-059-Q3	7/23/2014	0915	Water	X	X	2	JM
MW-108S-059-Q3	7/23/2014	0838	Water	X	X	2	JM
MW-109-059-Q3	7/23/2014	1000	Water	X	X	2	JM
MW-856-059-Q3	7/23/2014	1425	Water	X		1	JD
MW-125S1-059-Q3	7/23/2014	1325	Water	X	X	2	JD
MW-983-059-Q3	7/23/2014	1335	Water	X	X	2	JD
MW-125S2-059-Q3	7/23/2014	1410	Water	X	X	2	JD
MW-140S1-059-Q3	7/23/2014	0839	Water	X	X	2	JD
MW-140S2-059-Q3	7/23/2014	0915	Water	X	X	2	JD
MW-140S3-059-Q3	7/23/2014	0951	Water	X	X	2	JD
MW-141D-059-Q3	7/23/2014	1217	Water	X	X	2	JD
MW-141S1-059-Q3	7/23/2014	1102	Water	X	X	2	JD

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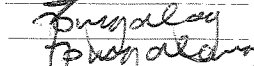
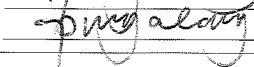

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Signatures Approved by:  Sampled by:  Relinquished by:  Received by:  Relinquished by:  Received by:	Date/Time 7/23/14 1730 7/23/14 1730 7/23/14 1730 7/23/14 1730 7/23/14 1730 7/23/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 2.9°C Airbill No: IK#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley				Container:	250 ml Poly (NH4)2, SO4, NH4, OH, 4°C	500 ml Poly HNO3, 4°C	Number of Containers	COMMENTS
Location Hinkley				Preservatives:				
Project Number 492581.UR.SW.FW				Filtered:	Field	Field		
Project Manager Jennifer Low				Holding Time (days):	28	180		
Sample Manager Jim Hanvey				Cr(VI) (E218.6) FF	Metals Dissolved (6020A/FF) FF Cr			
Cell Number (404) 229-2181								
Fax Number (510) 622-9136								
Task Order 59								
Project 2014-GMP-059-Q3								
Turnaround Time 10 Days								
Shipping Date:								
COC Number:								
SAMPLE ID	DATE	TIME	Matrix					
MW-141S2-059-Q3	7/23/2014	1141	Water	X	X		2	JD
MW-857-059-Q3	7/23/2014	1440	Water	X			1	MD
MW-32B2-059-Q3	7/23/2014	0911	Water	X	X		2	MD
MW-34-059-Q3	7/23/2014	1315	Water	X	X		2	MD
MW-972-059-Q3	7/23/2014	1325	Water	X	X		2	MD
MW-858-059-Q3	7/23/2014	1415	Water	X			1	PM
MW-50A-059-Q3	7/23/2014	1527	Water	X	X		2	JD
MW-50B-059-Q3	7/23/2014	1536	Water	X	X		2	TH
MW-50S-059-Q3	7/23/2014	1557	Water	X	X		2	PM
MW-55B-059-Q3	7/23/2014	1157	Water	X	X		2	PM
MW-974-059-Q3	7/23/2014	1158	Water	X	X		2	PM
MW-55C-059-Q3	7/23/2014	1351	Water	X	X		2	PM
MW-859-059-Q3	7/23/2014	1630	Water	X			1	SD
MW-156S-059-Q3	7/23/2014	1447	Water	X	X		2	SD
MW-157S-059-Q3	7/23/2014	1540	Water	X	X		2	SD
MW-171D1-059-Q3	7/23/2014	1026	Water	X	X		2	SD
MW-171D2-059-Q3	7/23/2014	0853	Water	X	X		2	SD

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Approved by:  Date/Time: 7/23/14 1730 Sampled by:  Date/Time: 7/23/14 1730 Relinquished by:  Date/Time: 7/23/14 1730 Received by:  Date/Time: 7/23/14 1730 Relinquished by:  Date/Time: 7/23/14 1730 Received by: Date/Time: 7/23/14 1730	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.0°C IR#2 Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	Special Instructions:
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Project Name PGE Hinkley				Container:		Metals Dissolved (6020AFF) FF Cr	C(VV) (E218.6) FF	Number of Containers	COMMENTS
Location Hinkley		Preservatives:		250 ml Poly (NH4)2, SO4, NH4, OH, 4°C	500 ml Poly HNO3, 4°C				
Project Number 492581.UR.SW.FW		Filtered:		Field	Field				
Project Manager Jennifer Low		Holding Time (days):		28	180				
Sample Manager Jim Hanvey									
Cell Number (404) 229-2181									
Fax Number (510) 622-9136									
Task Order 59									
Project 2014-GMP-059-Q3									
Turnaround Time 10 Days									
Shipping Date:									
COC Number:									
SAMPLE ID	DATE	TIME	Matrix						
MW-171S-059-Q3	7/23/2014	1103	Water	X	X			2	SD
MW-172S1-059-Q3	7/23/2014	1139	Water	X	X			2	SD
MW-172S2-059-Q3	7/23/2014	1243	Water	X	X			2	SD
MW-861-059-Q3	7/23/2014	0842	Water	X				1	TH
MW-87D-059-Q3	7/23/2014	0911	Water	X	X			2	TH
MW-87S-059-Q3	7/23/2014	0831	Water	X	X			2	TH
MW-91C-059-Q3	7/23/2014	1430	Water	X	X			2	TH
MW-92C-059-Q3	7/23/2014	1351	Water	X	X			2	TH
MW-94D-059-Q3	7/23/2014	1037	Water	X	X			2	TH
MW-94S-059-Q3	7/23/2014	0951	Water	X	X			2	TH
MW-97D-059-Q3	7/23/2014	1204	Water	X	X			2	TH
MW-97S-059-Q3	7/23/2014	1121	Water	X	X			2	TH
MW-98C-059-Q3	7/23/2014	1246	Water	X	X			2	TH
TOTAL NUMBER OF CONTAINERS								88	

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Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7/23/14 1730 7/23/14 1730 7/23/14 1730 7/23/14 1730 7/23/14 2000 7/23/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> / no 3.8°C Airbill No: <i>IR#2</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/23/2014 Workorder: N013028
 Rep sample Temp (Deg C): 2.9/3.6/3.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Sample ID MW-34-059-Q3 was received at pH 7. Acid added to pH <2.

Checklist Completed B AC  7/24/2014

Reviewed By:  07/28/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013028-021A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.158358 * 1 \\ &= 0.158358\end{aligned}$$

Reporting results in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 0.16$$

 8/7/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{6+}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{6+} calculated concentration
DF = dilution factor

For **N013028-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{6+}, \mu\text{g/L} &= 7.0359 * 5 \\ &= 35.1795\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{6+}, \mu\text{g/L} = 35$$

 8/6/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013028-003B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 8.3261482233 * 1 * (25/25) \\ &= 8.3261482233 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 8.3$$

 8/6/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013028
Test Method: EPA 6020
Analysis Date: 8/1/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46161

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013028-002B-DT 5X	Chromium	µg/L	0.683471819	NA	0.684182527	0.10%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013028
Test Method: EPA 6020
Analysis Date: 8/1/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46162

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013028-025B-DT 5X	Chromium	µg/L	2.733992149	NA	2.727736882	0.23%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013028
Test Method: EPA 6020
Analysis Date: 8/1/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46163

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013028-047B-DT 5X	Chromium	µg/L	0.346710829	NA	0.35845256	3.28%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013028-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94384						
Client ID: ZZZZZ	Batch ID: 46161	TestNo: EPA 6020 EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817753							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.073	2.0	20.00	0.6842	96.9	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013028-025B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94384						
Client ID: ZZZZZ	Batch ID: 46162	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817789						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.374	2.0	20.00	2.728	98.2	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

CLIENT: CH2M HILL
Work Order: N013028
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013028-047B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94384						
Client ID: ZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	18.675	2.0	20.00	0.3585	91.6	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

August 06, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013029

RE: PGE Hinkley, 492581.UR.AU.FW

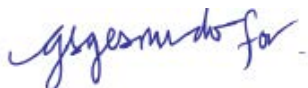
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 23, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013029

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 06-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013029
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013029-001A	MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/6/2014
N013029-001B	MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/6/2014
N013029-001C	MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/6/2014
N013029-001D	MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/6/2014
N013029-001E	MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	7/23/2014	8/6/2014
N013029-002A	MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	7/23/2014	8/6/2014
N013029-002B	MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	7/23/2014	8/6/2014
N013029-002C	MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	7/23/2014	8/6/2014
N013029-002D	MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	7/23/2014	8/6/2014
N013029-002E	MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	7/23/2014	8/6/2014
N013029-003A	MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	7/23/2014	8/6/2014
N013029-003B	MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	7/23/2014	8/6/2014
N013029-003C	MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	7/23/2014	8/6/2014
N013029-003D	MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	7/23/2014	8/6/2014
N013029-003E	MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	7/23/2014	8/6/2014
N013029-004A	MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	7/23/2014	8/6/2014
N013029-004B	MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	7/23/2014	8/6/2014
N013029-004C	MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	7/23/2014	8/6/2014
N013029-004D	MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	7/23/2014	8/6/2014
N013029-004E	MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	7/23/2014	8/6/2014
N013029-005A	MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	7/23/2014	8/6/2014
N013029-005B	MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	7/23/2014	8/6/2014
N013029-005C	MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	7/23/2014	8/6/2014
N013029-005D	MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	7/23/2014	8/6/2014
N013029-005E	MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	7/23/2014	8/6/2014
N013029-006A	MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	7/23/2014	8/6/2014
N013029-006B	MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	7/23/2014	8/6/2014
N013029-006C	MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	7/23/2014	8/6/2014
N013029-006D	MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	7/23/2014	8/6/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013029
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013029-006E	MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	7/23/2014	8/6/2014
N013029-007A	MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	7/23/2014	8/6/2014
N013029-007B	MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	7/23/2014	8/6/2014
N013029-007C	MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	7/23/2014	8/6/2014
N013029-007D	MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	7/23/2014	8/6/2014
N013029-007E	MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	7/23/2014	8/6/2014



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-001

Client Sample ID: MW-27A-059-Q3
Collection Date: 7/23/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-002

Client Sample ID: MW-27B-059-Q3
Collection Date: 7/23/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	940	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-003

Client Sample ID: MW-32B1-059-Q3
Collection Date: 7/23/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-004

Client Sample ID: MW-32S-059-Q3
Collection Date: 7/23/2014 11:13:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2400	20	20	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-005

Client Sample ID: MW-955-059-Q3
Collection Date: 7/23/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2400	22	22	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-006

Client Sample ID: MW-55A-059-Q3
Collection Date: 7/23/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	520	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-007

Client Sample ID: MW-55S-059-Q3
Collection Date: 7/23/2014 3:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	4000	33	33	mg/L	1	7/30/2014

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46198	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349						
Client ID: PBW	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815664						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46198	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349						
Client ID: LCSW	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		964.000	10	1000	0	96.4	80	120			

Sample ID N013040-005D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349						
Client ID: ZZZZZ	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815678						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		267.000	10					263.0	1.51	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46206	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: PBW	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) ND 10

Sample ID LCS-46206	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: LCSW	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 938.000 10 1000 0 93.8 80 120

Sample ID N013040-006D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: ZZZZZZ	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 243.000 10 237.0 2.50 5

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-001

Client Sample ID: MW-27A-059-Q3
Collection Date: 7/23/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	32	0.011	0.67	pCi/L	1	8/2/2014 09:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-002

Client Sample ID: MW-27B-059-Q3
Collection Date: 7/23/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	39	0.011	0.67	pCi/L	1	8/2/2014 09:28 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-003

Client Sample ID: MW-32B1-059-Q3
Collection Date: 7/23/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194				PrepDate: 7/29/2014		Analyst: CEI
Uranium	33	0.011	0.67		pCi/L	1	8/2/2014 09:34 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-32S-059-Q3
Lab Order: N013029	Collection Date: 7/23/2014 11:13:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013029-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	60	0.011	0.67	pCi/L	1	8/2/2014 09:50 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-005

Client Sample ID: MW-955-059-Q3
Collection Date: 7/23/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	56	0.011	0.67	pCi/L	1	8/2/2014 09:56 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-006

Client Sample ID: MW-55A-059-Q3
Collection Date: 7/23/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	7.2	0.011	0.67	pCi/L	1	8/2/2014 10:01 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-007

Client Sample ID: MW-55S-059-Q3
Collection Date: 7/23/2014 3:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	65	0.011	0.67	pCi/L	1	8/2/2014 10:07 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46194	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401
Client ID: PBW	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818668
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46194	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401
Client ID: LCSW	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818669
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	6.975	0.67	6.700	0	104 85 115

Sample ID N013029-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818673
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	40.958	0.67	6.700	31.82	136 75 125 S

Sample ID N013029-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818674
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	41.091	0.67	6.700	31.82	138 75 125 40.96 0.326 20 S

Sample ID N013040-004B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818687
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	87.448	0.67	6.700	77.25	152 75 125 S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-001

Client Sample ID: MW-27A-059-Q3
Collection Date: 7/23/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	12	0.016	0.20		µg/L	1	7/24/2014 01:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	11	0.030	1.0		µg/L	1	8/1/2014 06:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-002

Client Sample ID: MW-27B-059-Q3
Collection Date: 7/23/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	6.8	0.016	0.20		µg/L	1	7/24/2014 01:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	6.3	0.030	1.0		µg/L	1	8/1/2014 06:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-003

Client Sample ID: MW-32B1-059-Q3
Collection Date: 7/23/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	5.1	0.016	0.20		µg/L	1	7/24/2014 02:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	4.7	0.030	1.0		µg/L	1	8/1/2014 06:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-004

Client Sample ID: MW-32S-059-Q3
Collection Date: 7/23/2014 11:13:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/24/2014 02:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	8/1/2014 07:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-005

Client Sample ID: MW-955-059-Q3
Collection Date: 7/23/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/24/2014 02:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	3.7	0.030	1.0		µg/L	1	8/1/2014 07:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-006

Client Sample ID: MW-55A-059-Q3
Collection Date: 7/23/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 04:10 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/24/2014 03:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/1/2014 07:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-007

Client Sample ID: MW-55S-059-Q3
Collection Date: 7/23/2014 3:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140724A	QC Batch: R94316				PrepDate		Analyst: QBM
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/24/2014 03:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140801A	QC Batch: 46163				PrepDate	7/25/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	8/1/2014 07:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94397	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: PBW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818318						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94397	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: LCSW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.194 0.060 0.2000 0 96.9 90 110

Sample ID N013028-022ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.143 0.060 0.1479 3.11 20

Sample ID N013028-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.337 0.060 0.2000 0.1479 94.5 90 110

Sample ID N013028-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818324						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.213 0.060 0.2000 0.01684 98.3 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-023AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01684	92.8	90	110	0.2134	5.23	20	

Sample ID N013028-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01815	95.6	90	110				

Sample ID N013028-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01733	101	90	110				

Sample ID N013028-029AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02003	99.2	90	110				

Sample ID N013028-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02410	96.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-033AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.241	0.060	0.2000	0.03798	101	90	110				

Sample ID N013028-034AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02974	95.7	90	110				

Sample ID N013028-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.01910	102	90	110				

Sample ID N013028-041AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0	104	90	110				

Sample ID N013028-047AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.399	0.060	0.2000	0.2034	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013029-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02072	98.5	90	110				

Sample ID N013039-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.02258	95.3	90	110				

Sample ID N013039-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02483	98.0	90	110				

Sample ID N013039-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818357						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01677	98.5	90	110				

Sample ID N013039-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01595	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013039-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01620	91.1	90	110				

Sample ID N013039-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0.01824	94.9	90	110				

Sample ID N013039-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01458	99.9	90	110				

Sample ID N013039-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.263	0.060	0.2000	0.07000	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94316	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: PBW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94316	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: LCSW	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813965						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.109	0.20	5.000	0	102	90	110				
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Sample ID N013015-005A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813967						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.052	0.20						2.089	1.77	20	
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Sample ID N013015-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813968						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.063	0.20	1.000	2.089	97.5	90	110				
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Sample ID N013015-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813970						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.252	0.20	1.000	0.2289	102	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013015-010A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813971						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.205	0.20	1.000	0.2289	97.6	90	110	1.252	3.90	20	

Sample ID N013029-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.558	0.20	5.000	3.358	104	90	110				

Sample ID N013029-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.623	0.20	5.000	3.436	104	90	110				

Sample ID N013029-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813982						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.072	0.20	1.000	0	107	90	110				

Sample ID N013029-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.739	0.20	1.000	2.734	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013029-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813985						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.907	0.20	5.000	6.788	102	90	110				

Sample ID N013029-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813988						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.297	0.20	5.000	5.116	104	90	110				

Sample ID N013028-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813990						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Sample ID N013028-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813992						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.472	0.20	1.000	0.4012	107	90	110				

Sample ID N013028-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.653	0.20	5.000	8.606	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1813996						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.740	0.20	1.000	2.750	99.0	90	110				

Sample ID N013028-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.389	0.20	1.000	1.355	103	90	110				

Sample ID N013028-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.265	0.20	1.000	2.222	104	90	110				

Sample ID N013028-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.264	0.20	1.000	2.257	101	90	110				

Sample ID N013028-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94316						
Client ID: ZZZZZZ	Batch ID: R94316	TestNo: EPA 218.6		Analysis Date: 7/24/2014	SeqNo: 1814011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46163	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: PBW	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46163	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: LCSW	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817821						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.005 1.0 10.00 0 100 85 115

Sample ID N013028-047B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.950 1.0 10.00 0.3585 95.9 75 125

Sample ID N013028-047B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/25/2014	RunNo: 94384						
Client ID: ZZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.879 1.0 10.00 0.3585 95.2 75 125 9.950 0.726 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-001

Client Sample ID: MW-27A-059-Q3
Collection Date: 7/23/2014 2:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 17 0.10 1.0 mg/L 20 7/24/2014 11:57 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-002

Client Sample ID: MW-27B-059-Q3
Collection Date: 7/23/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 12 0.10 1.0 mg/L 20 7/24/2014 12:35 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-003

Client Sample ID: MW-32B1-059-Q3
Collection Date: 7/23/2014 3:41:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 9.4 0.051 0.50 mg/L 10 7/24/2014 10:54 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-004

Client Sample ID: MW-32S-059-Q3
Collection Date: 7/23/2014 11:13:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 19 0.10 1.0 mg/L 20 7/24/2014 11:07 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-955-059-Q3
Lab Order:	N013029	Collection Date:	7/23/2014 11:23:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N013029-005		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140724A	QC Batch: R94299	PrepDate	Analyst: PS
Nitrate as N	19 0.10	1.0	mg/L 20 7/24/2014 12:48 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-006

Client Sample ID: MW-55A-059-Q3
Collection Date: 7/23/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 0.43 0.0051 0.050 mg/L 1 7/24/2014 11:32 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 06-Aug-14

CLIENT: CH2M HILL
Lab Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013029-007

Client Sample ID: MW-55S-059-Q3
Collection Date: 7/23/2014 3:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140724A** QC Batch: **R94299** PrepDate Analyst: **PS**
Nitrate as N 24 0.10 1.0 mg/L 20 7/24/2014 11:45 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94299_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94299			
Client ID:	PBW	Batch ID:	R94299	TestNo:	EPA 300.0			Analysis Date:	7/24/2014	SeqNo:	1813433			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N		ND		0.050										

Sample ID	LCS-R94299_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94299			
Client ID:	LCSW	Batch ID:	R94299	TestNo:	EPA 300.0			Analysis Date:	7/24/2014	SeqNo:	1813434			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N		0.935		0.050	1.000	0		93.5	90	110				

Sample ID	N013029-003C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94299			
Client ID:	ZZZZZ	Batch ID:	R94299	TestNo:	EPA 300.0			Analysis Date:	7/24/2014	SeqNo:	1813444			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N		9.730		0.50							9.350	3.98	20	

Sample ID	N013029-003C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94299			
Client ID:	ZZZZZ	Batch ID:	R94299	TestNo:	EPA 300.0			Analysis Date:	7/24/2014	SeqNo:	1813445			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N		19.280		0.50	10.00	9.350		99.3	80	120				



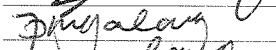
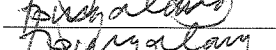
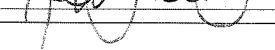

Sample ID	N013029-003C-MSD	SampType:	MSD	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94299			
Client ID:	ZZZZZ	Batch ID:	R94299	TestNo:	EPA 300.0			Analysis Date:	7/24/2014	SeqNo:	1813446			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N		19.070		0.50	10.00	9.350		97.2	80	120	19.28	1.10	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.AU.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-ATU-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	2x1000 ml Poly	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	Preservatives: (NH4)2, SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	HNO3			
MW-27A-059-Q3	7/23/2014	1447	Water	X	X	X	X	X	X	NO13029-1 ↓ -2 -3 -4 -5 -6 -7	6	JM
MW-27B-059-Q3	7/23/2014	1530	Water	X	X	X	X	X	X		6	JM
MW-32B1-059-Q3	7/23/2014	1541	Water	X	X	X	X	X	X		6	MD
MW-32S-059-Q3	7/23/2014	1113	Water	X	X	X	X	X	X		6	MD
MW-955-059-Q3	7/23/2014	1123	Water	X	X	X	X	X	X		6	MD
MW-55A-059-Q3	7/23/2014	0939	Water	X	X	X	X	X	X		6	PM
MW-55S-059-Q3	7/23/2014	1501	Water	X	X	X	X	X	X		6	PM
TOTAL NUMBER OF CONTAINERS										42		

Approved by:  7/23/14 1730 Sampled by:  7/23/14 1730 Relinquished by:  7/23/14 1730 Received by:  7/23/14 1730 Relinquished by:  7/23/14 2000 Received by:  7/23/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.5°C / 3.1°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	Special Instructions:
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/23/2014 Workorder: N013029
 Rep sample Temp (Deg C): 3.5/3.1 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC Cortes 7/24/2014

Reviewed by:  07/28/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118

www.atl-labs.com

TEL: 7023072659

FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

26-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013029-001E / MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	32OZP	1		
N013029-002E / MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	32OZP	1		
N013029-003E / MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	32OZP	1		
N013029-004E / MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	32OZP	1		
N013029-005E / MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	32OZP	1		
N013029-006E / MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	32OZP	1		
N013029-007E / MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

FedEx#s: 7706 9479 8585
7706 9479 9380
7706 9479 8390

Please use PO#:N13029A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill Samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <u>Al Cortez</u>	Date/Time	Received by: _____	Date/Time
	7/25/2014		1500
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013029-001D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(63.9129-63.7955)*1000000}{100}$$

1174 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1200 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/29/2014								TDS/CONDUCTIVITY
Date Finished: 7/30/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46198	100	64.107	64.1075	5	1	5.00		
LCS-46198	100	63.5078	63.6042	964	1	964.00		
N013029-001D	100	63.7955	63.9129	1174	1	1174.00	1593	0.74
N013029-002D	100	62.9916	63.0857	941	1	941.00	1312	0.72
N013029-003D	100	64.2731	64.4002	1271	1	1271.00	1741	0.73
N013029-004D	50	61.3601	61.4842	1241	2	2482.00	3080	0.81
N013029-005D	45	63.7752	63.8889	1137	2.2222222	2526.67	3100	0.82
N013029-006D	100	61.0209	61.0724	515	1	515.00	785	0.66
N013029-007D	30	60.7688	60.9015	1327	3.3333333	4423.33	4700	0.94
N013040-001D	100	61.7253	61.8661	1408	1	1408.00	1840	0.77
N013040-002D	30	59.9071	60.0309	1238	3.3333333	4126.67	4690	0.88
N013040-003D	45	60.6335	60.7608	1273	2.2222222	2828.89	3260	0.87
N013040-004D	25	60.9831	61.1133	1302	4	5208.00	5620	0.93
N013040-005D	100	63.9734	63.9997	263	1	263.00	402	0.65
N013040-005D-DUP	100	63.9932	64.0199	267	1	267.00	402	0.66

zmer
7/31/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/30/2014								TDS/CONDUCTIVITY
Date Finished: 7/31/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46206	100	64.1056	64.1058	2	1	2.00		
LCS-46206	100	63.5075	63.6013	938	1	938.00		
N013029-004D	50	63.7765	63.8983	1218	2	2436.00	3080	0.79
N013029-005D	45	64.2735	64.3828	1093	2.2222222	2428.89	3100	0.78
N013029-007D	30	61.3601	61.4806	1205	3.3333333	4016.67	4700	0.85
N013040-002D	30	62.9927	63.1116	1189	3.3333333	3963.33	4690	0.85
N013040-003D	45	63.7985	63.9187	1202	2.2222222	2671.11	3260	0.82
N013040-004D	25	60.7681	60.8939	1258	4	5032.00	5620	0.90
N013040-006D	100	63.9716	63.9953	237	1	237.00	393	0.60
N013040-006D-DUP	100	63.9911	64.0154	243	1	243.00	393	0.62
N013040-007D	45	61.7258	61.8461	1203	2.2222222	2673.33	3270	0.82
N013040-008D	100	59.9055	59.9502	447	1	447.00	718	0.62
N013040-009D	100	60.9821	61.1166	1345	1	1345.00	1821	0.74
N013071-001A	25	60.6314	60.7686	1372	4	5488.00	5330	1.03
N013071-002A	25	64.2518	64.4204	1686	4	6744.00	6120	1.10
N013071-003A	40	61.0211	61.1778	1567	2.5	3917.50	3830	1.02
N013071-004A	40	60.5304	60.6918	1614	2.5	4035.00	3810	1.06
N013071-005A	40	61.1366	61.2877	1511	2.5	3777.50	3710	1.02
N013071-006A	25	60.8364	61.0071	1707	4	6828.00	6280	1.09

JML
7/31/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N013029-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 47.4876118699287 * 1 * (25/25) * 0.67 \\ &= 31.8166999528522 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = \mathbf{32}$$

 8/6/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013029
Test Method: EPA 200.8
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46194

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013029-001B-DT 5X	Uranium	pCi/L	31.66357281	PASS	31.81669995	0.48%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013029-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8	Analysis Date: 8/2/2014	SeqNo: 1818672							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	47.839	1.3	13.40	31.82	120	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013029-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.020725 * 1 \\ &= 0.020725\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/6/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{6+}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{6+} calculated concentration
DF = dilution factor

For **N013029-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{6+}, \mu\text{g/L} &= 12.4843 * 1 \\ &= 12.4843\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{6+}, \mu\text{g/L} = 12$$

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013029-003C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.935 * 10 \\ &= 9.35 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Nitrate, mg/L} = 9.4$$

 8/6/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013029-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 11.233227659 * 1 * (25/25) \\ &= 11.233227659 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 11$$

 8/6/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013029
Test Method: EPA 6020
Analysis Date: 8/1/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46163

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013028-047B-DT 5X	Chromium	µg/L	0.346710829	NA	0.35845256	3.28%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013029
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013028-047B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94384						
Client ID: ZZZZZ	Batch ID: 46163	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/1/2014	SeqNo: 1817826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	18.675	2.0	20.00	0.3585	91.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 15, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013029
Pace Project No.: 30126323

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on August 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE SUMMARY

Project: N013029

Pace Project No.: 30126323

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126323001	MW-27A-059-Q3	Water	07/23/14 14:47	08/01/14 08:30
30126323002	MW-27B-059-Q3	Water	07/23/14 15:30	08/01/14 08:30
30126323003	MW-32B1-059-Q3	Water	07/23/14 15:41	08/01/14 08:30
30126323004	MW-32S-059-Q3	Water	07/23/14 11:13	08/01/14 08:30
30126323005	MW-955-059-Q3	Water	07/23/14 11:23	08/01/14 08:30
30126323006	MW-55A-059-Q3	Water	07/23/14 09:39	08/01/14 08:30
30126323007	MW-55S-059-Q3	Water	07/23/14 15:01	08/01/14 08:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N013029
Pace Project No.: 30126323

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126323001	MW-27A-059-Q3	EPA 900.0	FCC	2
30126323002	MW-27B-059-Q3	EPA 900.0	FCC	2
30126323003	MW-32B1-059-Q3	EPA 900.0	FCC	2
30126323004	MW-32S-059-Q3	EPA 900.0	FCC	2
30126323005	MW-955-059-Q3	EPA 900.0	FCC	2
30126323006	MW-55A-059-Q3	EPA 900.0	FCC	2
30126323007	MW-55S-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013029

Pace Project No.: 30126323

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 15, 2014

General Information:

7 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013029
Pace Project No.: 30126323

Sample: MW-27A-059-Q3 **Lab ID: 30126323001** Collected: 07/23/14 14:47 Received: 08/01/14 08:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	36.6 ± 8.31 (5.65) C:NA T:NA	pCi/L	08/07/14 18:26	12587-46-1	
Gross Beta	EPA 900.0	7.10 ± 1.93 (4.00) C:NA T:NA	pCi/L	08/07/14 18:26	12587-47-2	

Sample: MW-27B-059-Q3 **Lab ID: 30126323002** Collected: 07/23/14 15:30 Received: 08/01/14 08:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	38.9 ± 8.19 (3.88) C:NA T:NA	pCi/L	08/07/14 18:52	12587-46-1	
Gross Beta	EPA 900.0	6.29 ± 1.66 (4.00) C:NA T:NA	pCi/L	08/07/14 18:52	12587-47-2	

Sample: MW-32B1-059-Q3 **Lab ID: 30126323003** Collected: 07/23/14 15:41 Received: 08/01/14 08:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	37.2 ± 8.45 (5.08) C:NA T:NA	pCi/L	08/07/14 18:26	12587-46-1	
Gross Beta	EPA 900.0	5.51 ± 1.75 (4.00) C:NA T:NA	pCi/L	08/07/14 18:26	12587-47-2	

Sample: MW-32S-059-Q3 **Lab ID: 30126323004** Collected: 07/23/14 11:13 Received: 08/01/14 08:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	61.2 ± 15.1 (11.9) C:NA T:NA	pCi/L	08/07/14 18:26	12587-46-1	
Gross Beta	EPA 900.0	6.87 ± 3.13 (4.55) C:NA T:NA	pCi/L	08/07/14 18:26	12587-47-2	

Sample: MW-955-059-Q3 **Lab ID: 30126323005** Collected: 07/23/14 11:23 Received: 08/01/14 08:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	59.1 ± 13.6 (7.89) C:NA T:NA	pCi/L	08/07/14 18:27	12587-46-1	
Gross Beta	EPA 900.0	7.56 ± 2.81 (4.00) C:NA T:NA	pCi/L	08/07/14 18:27	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013029
Pace Project No.: 30126323

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	9.25 ± 3.02 (3.00) C:NA T:NA	pCi/L	08/07/14 18:42	12587-46-1	
Gross Beta		EPA 900.0	4.17 ± 1.28 (4.00) C:NA T:NA	pCi/L	08/07/14 18:42	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	70.3 ± 18.4 (16.7) C:NA T:NA	pCi/L	08/07/14 18:27	12587-46-1	
Gross Beta		EPA 900.0	13.3 ± 4.76 (6.30) C:NA T:NA	pCi/L	08/07/14 18:27	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY RECORD

ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
 www.assetlabs.com
 TEL: 7023072659 FAX: 7023072691



QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: SIGNED 30126323

26-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N013029-001E / MW-27A-059-Q3	Water	7/23/2014 2:47:00 PM	320ZP	1		001
N013029-002E / MW-27B-059-Q3	Water	7/23/2014 3:30:00 PM	320ZP	1		002
N013029-003E / MW-32B1-059-Q3	Water	7/23/2014 3:41:00 PM	320ZP	1		003
N013029-004E / MW-32S-059-Q3	Water	7/23/2014 11:13:00 AM	320ZP	1		004
N013029-005E / MW-955-059-Q3	Water	7/23/2014 11:23:00 AM	320ZP	1		005
N013029-006E / MW-55A-059-Q3	Water	7/23/2014 9:39:00 AM	320ZP	1		006
N013029-007E / MW-55S-059-Q3	Water	7/23/2014 3:01:00 PM	320ZP	1		007

General Comments: Please email sample receipt acknowledgement to the PM.

Fed#s: 7706 9479 8585
 7706 9479 9380
 7706 9479 8390

Please use PO#: N13029A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
 Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2M-Hill Samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <u>Al Cortez</u>	Date/Time: <u>7/25/2014</u>
Relinquished by: _____	Date/Time: _____
Received by: <u>Scott Munkie</u>	Date/Time: <u>8-1-14 0830</u>
Received by: _____	Date/Time: _____



Sample Condition Upon Receipt

Client Name: ATL

Project # 30126323

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770694798585

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other foam

Thermometer Used _____ NA Type of Ice: Wet Blue None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp: NA °C

Date and Initials of person examining contents: SRA 8-1-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>nt</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>PHL2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>SEA</u> Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 9/8/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: **30,126323**
 Client Name: **ATL**

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil Kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other
001	1/5																							
007	1																							

Quality Control Sample Performance Assessment

FCC
Date: 8/6/2014
Worklist: 20763
Matrix: Water
Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 768345



Sample Matrix Spike Control Assessment		Gross Beta	
Analyte:	Sample Collection Date:	Analyte:	Gross Beta
Gross Alpha	7/24/2014	Gross Alpha	7/24/2014
Sample I.D.:	30126324005	Sample I.D.:	30126324005
Sample MSD I.D.:	30126324005MS	Sample MSD I.D.:	30126324005MS
Spike I.D.:	13-048GA	Spike I.D.:	13-047GB
MS/MSD Decay Corrected Spike Conc. (pCi/L):	64.598	MS/MSD Decay Corrected Spike Conc. (pCi/L):	84.612
Spike Volume Used in MS (mL):	0.10	Spike Volume Used in MS (mL):	0.10
MS Aliquot (L, g, FI):	0.2000	MS Aliquot (L, g, FI):	0.2000
MS Target Conc. (pCi/L, g, FI):	32.307	MS Target Conc. (pCi/L, g, FI):	42.317
MSD Aliquot (L, g, FI):		MSD Aliquot (L, g, FI):	
MSD Target Conc. (pCi/L, g, FI):	1.140	MSD Target Conc. (pCi/L, g, FI):	2.571
MS Spike uncertainty (calculated):	3.316	MS Spike uncertainty (calculated):	2.069
Sample Result:	1.863	Sample Result:	0.864
Sample 1.96 Sigma Unc.:	26.832	Sample 1.96 Sigma Unc.:	47.062
Sample Matrix Spike Result:	6.852	Sample Matrix Spike Result:	9.075
Sample MS 1.96 Sigma Unc.:		Sample MS 1.96 Sigma Unc.:	
Sample Matrix Spike Duplicate Result:		Sample Matrix Spike Duplicate Result:	
Sample MSD 1.96 Sigma Unc.:		Sample MSD 1.96 Sigma Unc.:	
MS % Recovery:	72.79%	MS % Recovery:	106.32%
MS Assessment:	Pass	MS Assessment:	Pass
MSD Assessment:		MSD Assessment:	
MS/MSD Upper % Recovery Limits:	121.00%	MS/MSD Upper % Recovery Limits:	130.00%
MS/MSD Lower % Recovery Limits:	69.00%	MS/MSD Lower % Recovery Limits:	79.00%
Matrix Spike/Matrix Spike Duplicate Sample Assessment		Matrix Spike/Matrix Spike Duplicate Sample Assessment	

Method Blank Assessment		LCS		LCSD		Gross Beta		LCS		LCSD		LCS		LCSD		Assessment	
Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment	LCS	LCSD	LCS	LCSD	LCS	LCSD	LCS	LCSD	LCS	LCSD	Assessment
Gross Alpha	-0.3020	0.5680	1.8210	0.56300			8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	8/7/14 7.47	
Gross Beta	-0.0230	0.6860	1.7430	0.58800			13-048GA	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	13-047GB	
							64.598	84.532	84.532	84.532	84.532	84.532	84.532	84.532	84.532	84.532	
							0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	
							0.201	0.202	0.201	0.202	0.201	0.202	0.201	0.202	0.201	0.202	
							15.994	20.991	20.991	20.991	20.991	20.991	20.991	20.991	20.991	20.991	
							16.041	15.994	15.994	15.994	15.994	15.994	15.994	15.994	15.994	15.994	
							0.566	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	
							15.481	15.027	23.876	24.232	24.232	24.232	24.232	24.232	24.232	24.232	
							3.853	3.710	4.943	5.004	5.004	5.004	5.004	5.004	5.004	5.004	
							93.95%	113.74%	115.78%	115.78%	115.78%	115.78%	115.78%	115.78%	115.78%	115.78%	
							Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
							121.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%	130.00%	
							69.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%	79.00%	
							Duplicate Sample Assessment										
							Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
							Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	Gross Beta	
							LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	LCS20763	
							15.4810	23.8760	23.8760	23.8760	23.8760	23.8760	23.8760	23.8760	23.8760	23.8760	
							3.8530	4.9430	4.9430	4.9430	4.9430	4.9430	4.9430	4.9430	4.9430	4.9430	
							15.0270	24.2320	24.2320	24.2320	24.2320	24.2320	24.2320	24.2320	24.2320	24.2320	
							3.7100	5.0040	5.0040	5.0040	5.0040	5.0040	5.0040	5.0040	5.0040	5.0040	
							NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
							1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	1.48%	
							Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
							34.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Handwritten signature

August 07, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013039

RE: PGE Hinkley, 492581.UR.SW.FW

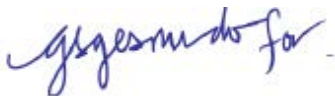
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 24, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013039

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (3.751 ug/L) and hexavalent chromium (2.664 ug/L) for sample N013039-014 (MW-112D-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.632 and 3.308 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (6.095 ug/L) and hexavalent chromium (3.96 ug/L) for sample N013039-023 (MW-184S3-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 6.231 and 5.219 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (4.895 ug/L) and hexavalent chromium (3.131 ug/L) for sample N013039-025 (MW-186S2-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 5.044 and 4.777 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (4.742 ug/L) and hexavalent chromium (3.366 ug/L) for sample N013039-026 (MW-186S3-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 4.392 and 3.666 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (3.714 ug/L) and hexavalent chromium (2.92 ug/L) for



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013039

CASE NARRATIVE

sample N013039-041 (MW-152S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.691 and 3.046 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 07-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013039
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013039-001A	MW-863-059-Q3	Water	7/24/2014 2:30:00 PM	7/24/2014	8/7/2014
N013039-002A	MW-104D-059-Q3	Water	7/24/2014 11:16:00 AM	7/24/2014	8/7/2014
N013039-002B	MW-104D-059-Q3	Water	7/24/2014 11:16:00 AM	7/24/2014	8/7/2014
N013039-003A	MW-104S1-059-Q3	Water	7/24/2014 12:49:00 PM	7/24/2014	8/7/2014
N013039-003B	MW-104S1-059-Q3	Water	7/24/2014 12:49:00 PM	7/24/2014	8/7/2014
N013039-004A	MW-104S2-059-Q3	Water	7/24/2014 12:02:00 PM	7/24/2014	8/7/2014
N013039-004B	MW-104S2-059-Q3	Water	7/24/2014 12:02:00 PM	7/24/2014	8/7/2014
N013039-005A	MW-106D-059-Q3	Water	7/24/2014 2:10:00 PM	7/24/2014	8/7/2014
N013039-005B	MW-106D-059-Q3	Water	7/24/2014 2:10:00 PM	7/24/2014	8/7/2014
N013039-006A	MW-979-059-Q3	Water	7/24/2014 2:20:00 PM	7/24/2014	8/7/2014
N013039-006B	MW-979-059-Q3	Water	7/24/2014 2:20:00 PM	7/24/2014	8/7/2014
N013039-007A	MW-106S-059-Q3	Water	7/24/2014 1:29:00 PM	7/24/2014	8/7/2014
N013039-007B	MW-106S-059-Q3	Water	7/24/2014 1:29:00 PM	7/24/2014	8/7/2014
N013039-008A	MW-113D-059-Q3	Water	7/24/2014 10:04:00 AM	7/24/2014	8/7/2014
N013039-008B	MW-113D-059-Q3	Water	7/24/2014 10:04:00 AM	7/24/2014	8/7/2014
N013039-009A	MW-113S1-059-Q3	Water	7/24/2014 8:34:00 AM	7/24/2014	8/7/2014
N013039-009B	MW-113S1-059-Q3	Water	7/24/2014 8:34:00 AM	7/24/2014	8/7/2014
N013039-010A	MW-113S2-059-Q3	Water	7/24/2014 9:09:00 AM	7/24/2014	8/7/2014
N013039-010B	MW-113S2-059-Q3	Water	7/24/2014 9:09:00 AM	7/24/2014	8/7/2014
N013039-011A	MW-864-059-Q3	Water	7/24/2014 3:25:00 PM	7/24/2014	8/7/2014
N013039-012A	MW-96D-059-Q3	Water	7/24/2014 3:59:00 PM	7/24/2014	8/7/2014
N013039-012B	MW-96D-059-Q3	Water	7/24/2014 3:59:00 PM	7/24/2014	8/7/2014
N013039-013A	MW-96S-059-Q3	Water	7/24/2014 1:59:00 PM	7/24/2014	8/7/2014
N013039-013B	MW-96S-059-Q3	Water	7/24/2014 1:59:00 PM	7/24/2014	8/7/2014
N013039-014A	MW-112D-059-Q3	Water	7/24/2014 2:03:00 PM	7/24/2014	8/7/2014
N013039-014B	MW-112D-059-Q3	Water	7/24/2014 2:03:00 PM	7/24/2014	8/7/2014
N013039-015A	MW-112S-059-Q3	Water	7/24/2014 1:21:00 PM	7/24/2014	8/7/2014
N013039-015B	MW-112S-059-Q3	Water	7/24/2014 1:21:00 PM	7/24/2014	8/7/2014
N013039-016A	MW-117D-059-Q3	Water	7/24/2014 9:59:00 AM	7/24/2014	8/7/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013039
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013039-016B	MW-117D-059-Q3	Water	7/24/2014 9:59:00 AM	7/24/2014	8/7/2014
N013039-017A	MW-982-059-Q3	Water	7/24/2014 10:09:00 AM	7/24/2014	8/7/2014
N013039-017B	MW-982-059-Q3	Water	7/24/2014 10:09:00 AM	7/24/2014	8/7/2014
N013039-018A	MW-117S1-059-Q3	Water	7/24/2014 8:49:00 AM	7/24/2014	8/7/2014
N013039-018B	MW-117S1-059-Q3	Water	7/24/2014 8:49:00 AM	7/24/2014	8/7/2014
N013039-019A	MW-117S2-059-Q3	Water	7/24/2014 9:23:00 AM	7/24/2014	8/7/2014
N013039-019B	MW-117S2-059-Q3	Water	7/24/2014 9:23:00 AM	7/24/2014	8/7/2014
N013039-020A	MW-865-059-Q3	Water	7/24/2014 2:20:00 PM	7/24/2014	8/7/2014
N013039-021A	MW-184S1-059-Q3	Water	7/24/2014 2:38:00 PM	7/24/2014	8/7/2014
N013039-021B	MW-184S1-059-Q3	Water	7/24/2014 2:38:00 PM	7/24/2014	8/7/2014
N013039-022A	MW-184S2-059-Q3	Water	7/24/2014 3:16:00 PM	7/24/2014	8/7/2014
N013039-022B	MW-184S2-059-Q3	Water	7/24/2014 3:16:00 PM	7/24/2014	8/7/2014
N013039-023A	MW-184S3-059-Q3	Water	7/24/2014 3:19:00 PM	7/24/2014	8/7/2014
N013039-023B	MW-184S3-059-Q3	Water	7/24/2014 3:19:00 PM	7/24/2014	8/7/2014
N013039-024A	MW-186S1-059-Q3	Water	7/24/2014 9:47:00 AM	7/24/2014	8/7/2014
N013039-024B	MW-186S1-059-Q3	Water	7/24/2014 9:47:00 AM	7/24/2014	8/7/2014
N013039-025A	MW-186S2-059-Q3	Water	7/24/2014 10:59:00 AM	7/24/2014	8/7/2014
N013039-025B	MW-186S2-059-Q3	Water	7/24/2014 10:59:00 AM	7/24/2014	8/7/2014
N013039-026A	MW-186S3-059-Q3	Water	7/24/2014 11:55:00 AM	7/24/2014	8/7/2014
N013039-026B	MW-186S3-059-Q3	Water	7/24/2014 11:55:00 AM	7/24/2014	8/7/2014
N013039-027A	MW-866-059-Q3	Water	7/24/2014 10:30:00 AM	7/24/2014	8/7/2014
N013039-028A	MW-151D1-059-Q3	Water	7/24/2014 12:03:00 PM	7/24/2014	8/7/2014
N013039-028B	MW-151D1-059-Q3	Water	7/24/2014 12:03:00 PM	7/24/2014	8/7/2014
N013039-029A	MW-987-059-Q3	Water	7/24/2014 12:04:00 PM	7/24/2014	8/7/2014
N013039-029B	MW-987-059-Q3	Water	7/24/2014 12:04:00 PM	7/24/2014	8/7/2014
N013039-030A	MW-151D2-059-Q3	Water	7/24/2014 12:45:00 PM	7/24/2014	8/7/2014
N013039-030B	MW-151D2-059-Q3	Water	7/24/2014 12:45:00 PM	7/24/2014	8/7/2014
N013039-031A	MW-151S-059-Q3	Water	7/24/2014 11:28:00 AM	7/24/2014	8/7/2014
N013039-031B	MW-151S-059-Q3	Water	7/24/2014 11:28:00 AM	7/24/2014	8/7/2014
N013039-032A	MW-190D1-059-Q3	Water	7/24/2014 9:15:00 AM	7/24/2014	8/7/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013039
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013039-032B	MW-190D1-059-Q3	Water	7/24/2014 9:15:00 AM	7/24/2014	8/7/2014
N013039-033A	MW-190D2-059-Q3	Water	7/24/2014 8:33:00 AM	7/24/2014	8/7/2014
N013039-033B	MW-190D2-059-Q3	Water	7/24/2014 8:33:00 AM	7/24/2014	8/7/2014
N013039-034A	MW-190S1-059-Q3	Water	7/24/2014 10:15:00 AM	7/24/2014	8/7/2014
N013039-034B	MW-190S1-059-Q3	Water	7/24/2014 10:15:00 AM	7/24/2014	8/7/2014
N013039-035A	MW-867-059-Q3	Water	7/24/2014 2:30:00 PM	7/24/2014	8/7/2014
N013039-036A	MW-80D-059-Q3	Water	7/24/2014 9:41:00 AM	7/24/2014	8/7/2014
N013039-036B	MW-80D-059-Q3	Water	7/24/2014 9:41:00 AM	7/24/2014	8/7/2014
N013039-037A	MW-80S-059-Q3	Water	7/24/2014 9:05:00 AM	7/24/2014	8/7/2014
N013039-037B	MW-80S-059-Q3	Water	7/24/2014 9:05:00 AM	7/24/2014	8/7/2014
N013039-038A	MW-868-059-Q3	Water	7/24/2014 8:35:00 AM	7/24/2014	8/7/2014
N013039-039A	MW-152D1-059-Q3	Water	7/24/2014 8:23:00 AM	7/24/2014	8/7/2014
N013039-039B	MW-152D1-059-Q3	Water	7/24/2014 8:23:00 AM	7/24/2014	8/7/2014
N013039-040A	MW-152D2-059-Q3	Water	7/24/2014 9:05:00 AM	7/24/2014	8/7/2014
N013039-040B	MW-152D2-059-Q3	Water	7/24/2014 9:05:00 AM	7/24/2014	8/7/2014
N013039-041A	MW-152S-059-Q3	Water	7/24/2014 9:39:00 AM	7/24/2014	8/7/2014
N013039-041B	MW-152S-059-Q3	Water	7/24/2014 9:39:00 AM	7/24/2014	8/7/2014
N013039-042A	MW-176S-059-Q3	Water	7/24/2014 1:11:00 PM	7/24/2014	8/7/2014
N013039-042B	MW-176S-059-Q3	Water	7/24/2014 1:11:00 PM	7/24/2014	8/7/2014
N013039-043A	MW-187D1-059-Q3	Water	7/24/2014 11:26:00 AM	7/24/2014	8/7/2014
N013039-043B	MW-187D1-059-Q3	Water	7/24/2014 11:26:00 AM	7/24/2014	8/7/2014
N013039-044A	MW-187D2-059-Q3	Water	7/24/2014 10:57:00 AM	7/24/2014	8/7/2014
N013039-044B	MW-187D2-059-Q3	Water	7/24/2014 10:57:00 AM	7/24/2014	8/7/2014
N013039-045A	MW-187S1-059-Q3	Water	7/24/2014 11:56:00 AM	7/24/2014	8/7/2014
N013039-045B	MW-187S1-059-Q3	Water	7/24/2014 11:56:00 AM	7/24/2014	8/7/2014
N013039-046A	MW-154S1-059-Q3	Water	7/24/2014 8:00:00 AM	7/24/2014	8/7/2014
N013039-046B	MW-154S1-059-Q3	Water	7/24/2014 8:00:00 AM	7/24/2014	8/7/2014
N013039-047A	MW-203S-059-Q3r	Water	7/24/2014 4:18:00 PM	7/24/2014	8/7/2014
N013039-047B	MW-203S-059-Q3r	Water	7/24/2014 4:18:00 PM	7/24/2014	8/7/2014



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-001

Client Sample ID: MW-863-059-Q3
Collection Date: 7/24/2014 2:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 04:30 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 08:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-002

Client Sample ID: MW-104D-059-Q3
Collection Date: 7/24/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 05:12 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/25/2014 08:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 02:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-003

Client Sample ID: MW-104S1-059-Q3
Collection Date: 7/24/2014 12:49:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/25/2014 09:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/2/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-004

Client Sample ID: MW-104S2-059-Q3
Collection Date: 7/24/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140725A	QC Batch: R94329				PrepDate		Analyst: QBM
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/25/2014 09:32 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.5	0.030	1.0		µg/L	1	8/2/2014 02:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-005

Client Sample ID: MW-106D-059-Q3
Collection Date: 7/24/2014 2:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 05:42 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 11:49 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-006

Client Sample ID: MW-979-059-Q3
Collection Date: 7/24/2014 2:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 06:02 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 12:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 03:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-007

Client Sample ID: MW-106S-059-Q3
Collection Date: 7/24/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/28/2014 12:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	8/2/2014 03:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-008

Client Sample ID: MW-113D-059-Q3
Collection Date: 7/24/2014 10:04:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 06:23 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 01:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 03:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-009

Client Sample ID: MW-113S1-059-Q3
Collection Date: 7/24/2014 8:34:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/28/2014 01:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	8/2/2014 03:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-010

Client Sample ID: MW-113S2-059-Q3
Collection Date: 7/24/2014 9:09:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/28/2014 02:01 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	8/2/2014 03:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-011

Client Sample ID: MW-864-059-Q3
Collection Date: 7/24/2014 3:25:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 06:44 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 02:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-012

Client Sample ID: MW-96D-059-Q3
Collection Date: 7/24/2014 3:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 07:26 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 03:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-013

Client Sample ID: MW-96S-059-Q3
Collection Date: 7/24/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/28/2014 03:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.4	0.030	1.0		µg/L	1	8/2/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-014

Client Sample ID: MW-112D-059-Q3
Collection Date: 7/24/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/28/2014 03:57 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.8	0.030	1.0		µg/L	1	8/2/2014 04:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-015

Client Sample ID: MW-112S-059-Q3
Collection Date: 7/24/2014 1:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/28/2014 08:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.5	0.030	1.0		µg/L	1	8/2/2014 04:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-016

Client Sample ID: MW-117D-059-Q3
Collection Date: 7/24/2014 9:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731A	QC Batch: R94397				PrepDate		Analyst: RB
Hexavalent Chromium	0.070	0.012	0.060		µg/L	1	7/31/2014 07:46 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 04:35 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 04:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-017

Client Sample ID: MW-982-059-Q3
Collection Date: 7/24/2014 10:09:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 08:28 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 05:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 04:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-018

Client Sample ID: MW-117S1-059-Q3
Collection Date: 7/24/2014 8:49:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140730A	QC Batch: R94354				PrepDate		Analyst: RB
Hexavalent Chromium	0.31	0.016	0.20		µg/L	1	7/30/2014 12:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-019

Client Sample ID: MW-117S2-059-Q3
Collection Date: 7/24/2014 9:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	0.98	0.016	0.20		µg/L	1	7/28/2014 05:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	8/2/2014 04:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-020

Client Sample ID: MW-865-059-Q3
Collection Date: 7/24/2014 2:20:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 09:30 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 06:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-021

Client Sample ID: MW-184S1-059-Q3
Collection Date: 7/24/2014 2:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	3.6	0.016	0.20		µg/L	1	7/28/2014 06:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/2/2014 04:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-022

Client Sample ID: MW-184S2-059-Q3
Collection Date: 7/24/2014 3:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	2.5	0.016	0.20		µg/L	1	7/28/2014 07:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	8/2/2014 04:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-023

Client Sample ID: MW-184S3-059-Q3
Collection Date: 7/24/2014 3:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	4.0	0.016	0.20		µg/L	1	7/28/2014 07:26 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46185				PrepDate	7/29/2014	Analyst: CEI
Chromium	6.1	0.030	1.0		µg/L	1	8/2/2014 05:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-024

Client Sample ID: MW-186S1-059-Q3
Collection Date: 7/24/2014 9:47:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140728A	QC Batch: R94339				PrepDate		Analyst: RB
Hexavalent Chromium	5.0	0.016	0.20		µg/L	1	7/28/2014 07:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	6.2	0.030	1.0		µg/L	1	8/2/2014 05:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-025

Client Sample ID: MW-186S2-059-Q3
Collection Date: 7/24/2014 10:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	3.1	0.016	0.20		µg/L	1	7/28/2014 01:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.9	0.030	1.0		µg/L	1	8/2/2014 05:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-026

Client Sample ID: MW-186S3-059-Q3
Collection Date: 7/24/2014 11:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	3.4	0.016	0.20		µg/L	1	7/28/2014 01:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.7	0.030	1.0		µg/L	1	8/2/2014 06:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-027

Client Sample ID: MW-866-059-Q3
Collection Date: 7/24/2014 10:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 09:51 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 02:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-028

Client Sample ID: MW-151D1-059-Q3
Collection Date: 7/24/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/28/2014 02:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	8/2/2014 06:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-029

Client Sample ID: MW-987-059-Q3
Collection Date: 7/24/2014 12:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.9	0.016	0.20		µg/L	1	7/28/2014 03:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	8/2/2014 06:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-030

Client Sample ID: MW-151D2-059-Q3
Collection Date: 7/24/2014 12:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	7/28/2014 03:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.9	0.030	1.0		µg/L	1	8/2/2014 06:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-031

Client Sample ID: MW-151S-059-Q3
Collection Date: 7/24/2014 11:28:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.5	0.016	0.20		µg/L	1	7/28/2014 03:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.0	0.030	1.0		µg/L	1	8/2/2014 06:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-032

Client Sample ID: MW-190D1-059-Q3
Collection Date: 7/24/2014 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/28/2014 04:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	8/2/2014 06:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-033

Client Sample ID: MW-190D2-059-Q3
Collection Date: 7/24/2014 8:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: IC6_140728A	QC Batch: R94341		PrepDate:		Analyst: RB		
Hexavalent Chromium	2.2	0.016	0.20	µg/L	1	7/28/2014 04:43 PM	
DISSOLVED METALS BY ICP-MS							
				EPA 6020			
RunID: ICP7_140802A	QC Batch: 46186		PrepDate: 7/29/2014		Analyst: CEI		
Chromium	2.7	0.030	1.0	µg/L	1	8/2/2014 06:39 PM	

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-034

Client Sample ID: MW-190S1-059-Q3
Collection Date: 7/24/2014 10:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/28/2014 05:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	8/2/2014 06:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-035

Client Sample ID: MW-867-059-Q3
Collection Date: 7/24/2014 2:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 10:12 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 03:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-036

Client Sample ID: MW-80D-059-Q3
Collection Date: 7/24/2014 9:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/28/2014 05:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/2/2014 06:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-037

Client Sample ID: MW-80S-059-Q3
Collection Date: 7/24/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	7/28/2014 06:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	8/2/2014 06:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-038

Client Sample ID: MW-868-059-Q3
Collection Date: 7/24/2014 8:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 10:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/28/2014 06:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-039

Client Sample ID: MW-152D1-059-Q3
Collection Date: 7/24/2014 8:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	0.97	0.016	0.20		µg/L	1	7/28/2014 07:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.5	0.030	1.0		µg/L	1	8/2/2014 07:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-040

Client Sample ID: MW-152D2-059-Q3
Collection Date: 7/24/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/28/2014 07:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/2/2014 07:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-041

Client Sample ID: MW-152S-059-Q3
Collection Date: 7/24/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	7/28/2014 07:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.7	0.030	1.0		µg/L	1	8/2/2014 07:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-042

Client Sample ID: MW-176S-059-Q3
Collection Date: 7/24/2014 1:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	7/28/2014 08:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/2/2014 07:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-043

Client Sample ID: MW-187D1-059-Q3
Collection Date: 7/24/2014 11:26:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.7	0.016	0.20		µg/L	1	7/28/2014 08:44 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.3	0.030	1.0		µg/L	1	8/2/2014 07:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-044

Client Sample ID: MW-187D2-059-Q3
Collection Date: 7/24/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140728A	QC Batch: R94341				PrepDate		Analyst: RB
Hexavalent Chromium	2.2	0.016	0.20		µg/L	1	7/28/2014 09:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	8/2/2014 07:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-045

Client Sample ID: MW-187S1-059-Q3
Collection Date: 7/24/2014 11:56:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/29/2014 09:24 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	8/2/2014 07:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-046

Client Sample ID: MW-154S1-059-Q3
Collection Date: 7/24/2014 8:00:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	13	0.016	0.20		µg/L	1	7/29/2014 10:00 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46186				PrepDate	7/29/2014	Analyst: CEI
Chromium	14	0.030	1.0		µg/L	1	8/2/2014 07:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013039-047

Client Sample ID: MW-203S-059-Q3r
Collection Date: 7/24/2014 4:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	7/29/2014 10:30 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.7	0.030	1.0		µg/L	1	8/2/2014 08:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94397	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397
Client ID: PBW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818318
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94397	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397
Client ID: LCSW	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818319
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.194	0.060	0.2000	0	96.9 90 110
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Sample ID N013028-022ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818321
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.143	0.060			0.1479 3.11 20
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Sample ID N013028-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818322
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.337	0.060	0.2000	0.1479	94.5 90 110
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Sample ID N013028-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397
Client ID: ZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818324
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.213	0.060	0.2000	0.01684	98.3 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-023AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818325						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01684	92.8	90	110	0.2134	5.23	20	

Sample ID N013028-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818327						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01815	95.6	90	110				

Sample ID N013028-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01733	101	90	110				

Sample ID N013028-029AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02003	99.2	90	110				

Sample ID N013028-030AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818335						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02410	96.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013028-033AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.241	0.060	0.2000	0.03798	101	90	110				

Sample ID N013028-034AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02974	95.7	90	110				

Sample ID N013028-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.222	0.060	0.2000	0.01910	102	90	110				

Sample ID N013028-041AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0	104	90	110				

Sample ID N013028-047AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818347						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.399	0.060	0.2000	0.2034	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013029-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.02072	98.5	90	110				

Sample ID N013039-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818351						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.02258	95.3	90	110				

Sample ID N013039-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.221	0.060	0.2000	0.02483	98.0	90	110				

Sample ID N013039-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818357						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01677	98.5	90	110				

Sample ID N013039-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.212	0.060	0.2000	0.01595	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013039-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0.01620	91.1	90	110				

Sample ID N013039-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.060	0.2000	0.01824	94.9	90	110				

Sample ID N013039-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818367						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01458	99.9	90	110				

Sample ID N013039-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94397						
Client ID: ZZZZZZ	Batch ID: R94397	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818369						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.263	0.060	0.2000	0.07000	96.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013039-020AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01731	98.4	90	110				

Sample ID N013039-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.02099	98.2	90	110				

Sample ID N013039-035AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0.02198	94.4	90	110				

Sample ID N013039-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818395						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01502	98.9	90	110				

Sample ID N013040-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818397						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01554	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-033A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814331						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0.05140	96.6	90	110	1.026	0.871	20	

Sample ID N013028-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814333						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0.02390	97.9	90	110				

Sample ID N013028-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814337						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.275	0.20	1.000	2.295	98.0	90	110				

Sample ID N013028-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814339						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.573	0.20	1.000	2.582	99.1	90	110				

Sample ID N013028-037A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814341						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.578	0.20	1.000	0.5912	98.7	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814343						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110
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Sample ID N013028-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814345						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.772	0.20	5.000	2.804	99.4	90	110
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Sample ID N013028-040A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814349						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.749	0.20	5.000	2.758	99.8	90	110
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Sample ID N013028-041A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814350						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110
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Sample ID N013028-043A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814353						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.244	0.20	5.000	3.169	101	90	110
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013028-044A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.561	0.20	5.000	6.528	101	90	110				

Sample ID N013028-045A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.177	0.20	1.000	1.159	102	90	110				

Sample ID N013028-046A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814362						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.517	0.20	5.000	4.465	101	90	110				

Sample ID N013028-047A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.192	0.20	1.000	0.1993	99.3	90	110				

Sample ID N013039-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814366						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814368						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0.02590	98.8	90	110				

Sample ID N013039-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814372						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.565	0.20	5.000	3.425	103	90	110				

Sample ID N013039-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94329						
Client ID: ZZZZZZ	Batch ID: R94329	TestNo: EPA 218.6		Analysis Date: 7/25/2014	SeqNo: 1814374						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.068	0.20	1.000	3.117	95.1	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94339	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: PBW	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814904						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.20

Sample ID LCS-R94339	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: LCSW	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814905						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 4.890 0.20 5.000 0 97.8 90 110

Sample ID N013039-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814907						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 1.003 0.20 1.000 0.04240 96.1 90 110

Sample ID N013039-006A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814909						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 1.002 0.20 1.000 0.02570 97.6 90 110 0.9876 1.45 20

Sample ID N013039-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814911						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 3.810 0.20 1.000 2.882 92.8 90 110

Qualifiers:

- | | | |
|---|--|--|
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| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814915						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.981	0.20	1.000	0	98.1	90	110				

Sample ID N013039-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814917						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.827	0.20	5.000	2.896	98.6	90	110				

Sample ID N013039-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814919						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.817	0.20	5.000	2.899	98.4	90	110				

Sample ID N013039-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814921						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.983	0.20	1.000	0	98.3	90	110				

Sample ID N013039-005ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814922						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.039	0.20						0.04240	0	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814923						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0.02570	96.2	90	110				

Sample ID N013039-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814927						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0.01880	98.0	90	110				

Sample ID N013039-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814929						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.839	0.20	5.000	2.843	99.9	90	110				

Sample ID N013039-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814931						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.567	0.20	5.000	2.664	98.1	90	110				

Sample ID N013039-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814932						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.781	0.20	5.000	2.852	98.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814934						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0.08060	97.0	90	110				

Sample ID N013039-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814938						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0.07110	98.1	90	110				

Sample ID N013039-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814942						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.956	0.20	1.000	0.9831	97.3	90	110				

Sample ID N013039-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.986	0.20	1.000	0	98.6	90	110				

Sample ID N013039-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.576	0.20	5.000	3.587	99.8	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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TestCode: 218.6_WPGE

Sample ID N013039-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1814950							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.501	0.20	5.000	2.544	99.1	90	110				

Sample ID N013039-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1814952							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.962	0.20	5.000	3.960	100	90	110				

Sample ID N013039-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94339						
Client ID: ZZZZZZ	Batch ID: R94339	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1814954							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.941	0.20	5.000	5.046	97.9	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94341	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: PBW	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814974						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94341	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: LCSW	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814975						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.022	0.20	5.000	0	100	90	110				
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Sample ID N013039-025A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814977						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	3.144	0.20						3.131	0.408	20	
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Sample ID N013039-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814978						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.118	0.20	5.000	3.131	99.7	90	110				
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Sample ID N013039-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814980						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	8.332	0.20	5.000	3.366	99.3	90	110				
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-026A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814981						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.304	0.20	5.000	3.366	98.8	90	110	8.332	0.334	20	

Sample ID N013039-027A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0.02600	100	90	110				

Sample ID N013039-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.880	0.20	1.000	1.936	94.4	90	110				

Sample ID N013039-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814989						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.892	0.20	1.000	1.898	99.4	90	110				

Sample ID N013039-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814991						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.415	0.20	5.000	2.446	99.4	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814993						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.331	0.20	5.000	2.523	96.2	90	110				

Sample ID N013039-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.755	0.20	5.000	2.757	100	90	110				

Sample ID N013039-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1814999						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.229	0.20	5.000	2.250	99.6	90	110				

Sample ID N013039-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815001						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.725	0.20	5.000	2.642	102	90	110				

Sample ID N013039-036A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.373	0.20	1.000	1.299	107	90	110				

Qualifiers:

- | | | |
|---|--|--|
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TestCode: 218.6_WPGE

Sample ID N013039-037A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.142	0.20	1.000	1.159	98.3	90	110				

Sample ID N013039-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815009						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.025	0.20	1.000	0	103	90	110				

Sample ID N013039-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.972	0.20	5.000	0.9665	100	90	110				

Sample ID N013039-040A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815013						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.371	0.20	5.000	1.343	101	90	110				

Sample ID N013039-041A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6		Analysis Date: 7/28/2014	SeqNo: 1815015						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.988	0.20	5.000	2.920	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-042A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1815017							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.242	0.20	5.000	1.298	98.9	90	110				

Sample ID N013039-043A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1815021							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.732	0.20	5.000	2.674	101	90	110				

Sample ID N013039-044A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94341						
Client ID: ZZZZZZ	Batch ID: R94341	TestNo: EPA 218.6	Analysis Date: 7/28/2014	SeqNo: 1815023							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.150	0.20	5.000	2.160	99.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-046A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	17.813	0.20	5.000	12.79	101	90	110	17.78	0.179	20	

Sample ID N013039-047A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.381	0.20	5.000	2.382	100	90	110				

Sample ID N013040-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.530	0.20	1.000	0.5651	96.5	90	110				

Sample ID N013040-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.420	0.20	1.000	2.458	96.2	90	110				

Sample ID N013040-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.752	0.20	1.000	1.705	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
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TestCode: 218.6_WPGE

Sample ID N013040-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.574	0.20	1.000	1.558	102	90	110
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Sample ID N013040-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815104						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110
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Sample ID N013040-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815108						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.029	0.20	1.000	0	103	90	110
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Sample ID N013040-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.733	0.20	1.000	1.746	98.7	90	110
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Sample ID N013054-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.617	0.20	1.000	0.5769	104	90	110
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815116						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0	106	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013040-009A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815800						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.660	0.20	5.000	4.678	99.6	90	110	9.590	0.724	20	

Sample ID N013039-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815801						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.308	0.20	1.000	0.3053	100	90	110				

Sample ID N013056-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.987	0.20	1.000	0	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46185	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46185	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818528						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46185	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46185	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.367 1.0 10.00 0 104 85 115

Sample ID N013039-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46185	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818535						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.845 1.0 10.00 0.3653 105 75 125

Sample ID N013039-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46185	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818536						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.827 1.0 10.00 0.3653 105 75 125 10.85 0.163 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46186	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46186	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818563						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46186	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46186	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818564						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.968 1.0 10.00 0 99.7 85 115

Sample ID N013039-024B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46186	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 16.769 1.0 10.00 6.244 105 75 125

Sample ID N013039-024B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46186	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818569						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 16.860 1.0 10.00 6.244 106 75 125 16.77 0.537 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46187	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46187	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818594						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.174 1.0 10.00 0 102 85 115

Sample ID N013039-047B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.259 1.0 10.00 2.745 105 75 125

Sample ID N013039-047B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.023 1.0 10.00 2.745 103 75 125 13.26 1.80 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 250 ml Poly, 500 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C, HNO3, 4°C Filtered: Field, Field Holding Time (days): 28, 180	Cr(VI) (E218.6) FF Metals Dissolved (6020A(FF)) FF Cr	Number of Containers COMMENTS			
SAMPLE ID	DATE	TIME	Matrix						
MW-863-059-Q3	7/24/2014	1430	Water	X				1	JM
MW-104D-059-Q3	7/24/2014	1116	Water	X	X			2	JM
MW-104S1-059-Q3	7/24/2014	1249	Water	X	X			2	JM
MW-104S2-059-Q3	7/24/2014	1202	Water	X	X			2	JM
MW-106D-059-Q3	7/24/2014	1410	Water	X	X			2	JM
MW-979-059-Q3	7/24/2014	1420	Water	X	X			2	JM
MW-106S-059-Q3	7/24/2014	1329	Water	X	X			2	JM
MW-113D-059-Q3	7/24/2014	1004	Water	X	X			2	JM
MW-113S1-059-Q3	7/24/2014	0834	Water	X	X			2	JM
MW-113S2-059-Q3	7/24/2014	0909	Water	X	X			2	JM
MW-864-059-Q3	7/24/2014	1525	Water	X				1	JD
MW-96D-059-Q3	7/24/2014	1559	Water	X	X			2	PM
MW-96S-059-Q3	7/24/2014	1359	Water	X	X			2	MD
MW-112D-059-Q3	7/24/2014	1403	Water	X	X			2	JD
MW-112S-059-Q3	7/24/2014	1321	Water	X	X			2	JD
MW-117D-059-Q3	7/24/2014	0959	Water	X	X			2	JD
MW-982-059-Q3	7/24/2014	1009	Water	X	X			2	JD

NO13039-1

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Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>	Signatures Date/Time 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 2000 7/24/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 278°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 250 ml Poly (NH4)2SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C Preservatives: Filtered: Field Field Holding Time (days): 28 180		C(N) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix					
MW-117S1-059-Q3	7/24/2014	0849	Water	x	x		2	JD
MW-117S2-059-Q3	7/24/2014	0923	Water	x	x		2	JD
MW-865-059-Q3	7/24/2014	1420	Water	x			1	MD
MW-184S1-059-Q3	7/24/2014	1438	Water	x	x		2	TH
MW-184S2-059-Q3	7/24/2014	1516	Water	x	x		2	TH
MW-184S3-059-Q3	7/24/2014	1519	Water	x	x		2	JD
MW-186S1-059-Q3	7/24/2014	0947	Water	x	x		2	MD
MW-186S2-059-Q3	7/24/2014	1059	Water	x	x		2	MD
MW-186S3-059-Q3	7/24/2014	1155	Water	x	x		2	MD
MW-866-059-Q3	7/24/2014	1030	Water	x			1	PM
MW-151D1-059-Q3	7/24/2014	1203	Water	x	x		2	PM
MW-987-059-Q3	7/24/2014	1204	Water	x	x		2	PM
MW-151D2-059-Q3	7/24/2014	1245	Water	x	x		2	PM
MW-151S-059-Q3	7/24/2014	1128	Water	x	x		2	PM
MW-190D1-059-Q3	7/24/2014	0915	Water	x	x		2	PM
MW-190D2-059-Q3	7/24/2014	0833	Water	x	x		2	PM
MW-190S1-059-Q3	7/24/2014	1015	Water	x	x		2	PM

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Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures 	Date/Time 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 1750 7/24/14 2000 7/24/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no <input type="radio"/> 3-5°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Containers: 250 ml Poly (NH4)2, SO4, NH4, OH, 4°C 500 ml Poly HNO3, 4°C Preservatives: Filtered: Field Field Holding Time (days): 28 180	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS		
SAMPLE ID DATE TIME Matrix									
MW-867-059-Q3	7/24/2014	1430	Water	X				1	SD
MW-80D-059-Q3	7/24/2014	0941	Water	X	X			2	SD
MW-80S-059-Q3	7/24/2014	0905	Water	X	X			2	SD
MW-868-059-Q3	7/24/2014	0835	Water	X				1	TH
MW-152D1-059-Q3	7/24/2014	0823	Water	X	X			2	TH
MW-152D2-059-Q3	7/24/2014	0905	Water	X	X			2	TH
MW-152S-059-Q3	7/24/2014	0939	Water	X	X			2	TH
MW-176S-059-Q3	7/24/2014	1311	Water	X	X			2	TH
MW-187D1-059-Q3	7/24/2014	1126	Water	X	X			2	TH
MW-187D2-059-Q3	7/24/2014	1057	Water	X	X			2	TH
MW-187S1-059-Q3	7/24/2014	1156	Water	X	X			2	TH
MW-154S1-059-Q3	7/24/2014	0800	Water	X	X			2	SD
MW-203S-059-Q3r	7/24/2014	1618	Water	X	X			2	JM
TOTAL NUMBER OF CONTAINERS								88	

Approved by  Sampled by  Relinquished by  Received by  Relinquished by  Received by 	Signatures Date/Time 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 1730 7/24/14 2000	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3.6°C Airbill No: 1P#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/24/2014 Workorder: N013039
 Rep sample Temp (Deg C): 2.8/3.3/3.6 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC  7/25/2014

Reviewed By:  07/28/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013039-016A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.070005 * 1 \\ &= 0.070005\end{aligned}$$

Reporting results in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = \mathbf{0.070}$$



8/7/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013039-003A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 3.4254 * 1 \\ &= 3.4254\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 3.4$$

 8/7/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013039-003B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 4.02469141399711 * 1 * (25/25) \\ &= 4.02469141399711 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 4.0$$

 8/6/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013039
Test Method: EPA 6020
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46185

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013039-002B-DT 5X	Chromium	µg/L	0.322606276	NA	0.365258715	11.68%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013039
Test Method: EPA 6020
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46186

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013039-024B-DT 5X	Chromium	µg/L	6.30883458	NA	6.243713802	1.04%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013039
Test Method: EPA 6020
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46187

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013039-047B-DT 5X	Chromium	µg/L	2.692022102	NA	2.745431995	1.95%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013039-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46185	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818534						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.299	2.0	20.00	0.3653	99.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013039-024B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46186	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	26.315	2.0	20.00	6.244	100	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N013039
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013039-047B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.360	2.0	20.00	2.745	98.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

August 07, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013040

RE: PGE Hinkley, 492581.UR.AU.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 24, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013040

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (4.005 ug/L) and hexavalent chromium (2.458 ug/L) for sample N013040-002 (MW-89S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.607 and 3.042 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 07-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013040
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013040-001A	MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	7/24/2014	8/7/2014
N013040-001B	MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	7/24/2014	8/7/2014
N013040-001C	MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	7/24/2014	8/7/2014
N013040-001D	MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	7/24/2014	8/7/2014
N013040-001E	MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	7/24/2014	8/7/2014
N013040-002A	MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	7/24/2014	8/7/2014
N013040-002B	MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	7/24/2014	8/7/2014
N013040-002C	MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	7/24/2014	8/7/2014
N013040-002D	MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	7/24/2014	8/7/2014
N013040-002E	MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	7/24/2014	8/7/2014
N013040-003A	MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	7/24/2014	8/7/2014
N013040-003B	MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	7/24/2014	8/7/2014
N013040-003C	MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	7/24/2014	8/7/2014
N013040-003D	MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	7/24/2014	8/7/2014
N013040-003E	MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	7/24/2014	8/7/2014
N013040-004A	MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	7/24/2014	8/7/2014
N013040-004B	MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	7/24/2014	8/7/2014
N013040-004C	MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	7/24/2014	8/7/2014
N013040-004D	MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	7/24/2014	8/7/2014
N013040-004E	MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	7/24/2014	8/7/2014
N013040-005A	MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	7/24/2014	8/7/2014
N013040-005B	MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	7/24/2014	8/7/2014
N013040-005C	MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	7/24/2014	8/7/2014
N013040-005D	MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	7/24/2014	8/7/2014
N013040-005E	MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	7/24/2014	8/7/2014
N013040-006A	MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	7/24/2014	8/7/2014
N013040-006B	MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	7/24/2014	8/7/2014
N013040-006C	MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	7/24/2014	8/7/2014
N013040-006D	MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	7/24/2014	8/7/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013040
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013040-006E	MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	7/24/2014	8/7/2014
N013040-007A	MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	7/24/2014	8/7/2014
N013040-007B	MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	7/24/2014	8/7/2014
N013040-007C	MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	7/24/2014	8/7/2014
N013040-007D	MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	7/24/2014	8/7/2014
N013040-007E	MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	7/24/2014	8/7/2014
N013040-008A	MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	7/24/2014	8/7/2014
N013040-008B	MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	7/24/2014	8/7/2014
N013040-008C	MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	7/24/2014	8/7/2014
N013040-008D	MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	7/24/2014	8/7/2014
N013040-008E	MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	7/24/2014	8/7/2014
N013040-009A	MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	7/24/2014	8/7/2014
N013040-009B	MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	7/24/2014	8/7/2014
N013040-009C	MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	7/24/2014	8/7/2014
N013040-009D	MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	7/24/2014	8/7/2014
N013040-009E	MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	7/24/2014	8/7/2014



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-001

Client Sample ID: MW-89D-059-Q3
Collection Date: 7/24/2014 12:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1400	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-002

Client Sample ID: MW-89S-059-Q3
Collection Date: 7/24/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	4100	33	33	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-003

Client Sample ID: MW-70D-059-Q3
Collection Date: 7/24/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2800	22	22	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-004

Client Sample ID: MW-70S-059-Q3
Collection Date: 7/24/2014 12:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate	7/29/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	5200	40	40	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-005

Client Sample ID: MW-85D-059-Q3
Collection Date: 7/24/2014 10:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140729B	QC Batch: 46198			PrepDate: 7/29/2014		Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	260	10	10	mg/L	1	7/29/2014 02:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-006

Client Sample ID: MW-957-059-Q3
Collection Date: 7/24/2014 11:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	240	10	10	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-007

Client Sample ID: MW-85S-059-Q3
Collection Date: 7/24/2014 11:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	2700	22	22	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-008

Client Sample ID: MW-86D-059-Q3
Collection Date: 7/24/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	450	10	10	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-009

Client Sample ID: MW-86S-059-Q3
Collection Date: 7/24/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140730D	QC Batch: 46206			PrepDate	7/30/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/30/2014 01:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46198	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349
Client ID: PBW	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815664
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera ND 10

Sample ID LCS-46198	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349
Client ID: LCSW	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815665
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 964.000 10 1000 0 96.4 80 120

Sample ID N013040-005D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/29/2014	RunNo: 94349
Client ID: ZZZZZ	Batch ID: 46198	TestNo: SM2540C		Analysis Date: 7/29/2014	SeqNo: 1815678
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Dissolved Solids (Residue, Filtera 267.000 10 263.0 1.51 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46206	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: PBW	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) ND 10

Sample ID LCS-46206	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: LCSW	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 938.000 10 1000 0 93.8 80 120

Sample ID N013040-006D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/30/2014	RunNo: 94367						
Client ID: ZZZZZZ	Batch ID: 46206	TestNo: SM2540C		Analysis Date: 7/30/2014	SeqNo: 1816286						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids (Residue, Filtera) 243.000 10 237.0 2.50 5

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-001

Client Sample ID: MW-89D-059-Q3
Collection Date: 7/24/2014 12:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	13	0.011	0.67	pCi/L	1	8/2/2014 10:12 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-89S-059-Q3
Lab Order: N013040	Collection Date: 7/24/2014 11:23:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013040-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	82	0.011	0.67	pCi/L	1	8/2/2014 10:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-003

Client Sample ID: MW-70D-059-Q3
Collection Date: 7/24/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	66	0.011	0.67	pCi/L	1	8/2/2014 10:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-004

Client Sample ID: MW-70S-059-Q3
Collection Date: 7/24/2014 12:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	77	0.011	0.67	pCi/L	1	8/2/2014 10:29 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-005

Client Sample ID: MW-85D-059-Q3
Collection Date: 7/24/2014 10:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194				PrepDate: 7/29/2014		Analyst: CEI
Uranium	1.9	0.011	0.67		pCi/L	1	8/2/2014 10:40 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-006

Client Sample ID: MW-957-059-Q3
Collection Date: 7/24/2014 11:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	2.0	0.011	0.67	pCi/L	1	8/2/2014 10:56 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-007

Client Sample ID: MW-85S-059-Q3
Collection Date: 7/24/2014 11:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI	
Uranium	19	0.011	0.67	pCi/L	1	8/2/2014 11:02 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-008

Client Sample ID: MW-86D-059-Q3
Collection Date: 7/24/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	8.3	0.011	0.67	pCi/L	1	8/2/2014 11:08 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-009

Client Sample ID: MW-86S-059-Q3
Collection Date: 7/24/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140802A	QC Batch: 46194			PrepDate	7/29/2014	Analyst: CEI
Uranium	44	0.011	0.67	pCi/L	1	8/2/2014 11:13 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46194	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	ND	0.67									

Sample ID LCS-46194	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818669						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	6.975	0.67	6.700	0	104	85	115				

Sample ID N013029-001B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	40.958	0.67	6.700	31.82	136	75	125				S

Sample ID N013029-001B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818674						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	41.091	0.67	6.700	31.82	138	75	125	40.96	0.326	20	S

Sample ID N013040-004B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8		Analysis Date: 8/2/2014	SeqNo: 1818687						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	87.448	0.67	6.700	77.25	152	75	125				S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-001

Client Sample ID: MW-89D-059-Q3
Collection Date: 7/24/2014 12:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	0.57	0.016	0.20		µg/L	1	7/29/2014 11:10 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 09:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-002

Client Sample ID: MW-89S-059-Q3
Collection Date: 7/24/2014 11:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	2.5	0.016	0.20		µg/L	1	7/29/2014 11:54 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/2/2014 09:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-003

Client Sample ID: MW-70D-059-Q3
Collection Date: 7/24/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/29/2014 12:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.2	0.030	1.0		µg/L	1	8/2/2014 09:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-004

Client Sample ID: MW-70S-059-Q3
Collection Date: 7/24/2014 12:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	7/29/2014 12:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	8/2/2014 09:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-005

Client Sample ID: MW-85D-059-Q3
Collection Date: 7/24/2014 10:55:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140731B	QC Batch: R94398				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	7/31/2014 10:54 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 12:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 09:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-006

Client Sample ID: MW-957-059-Q3
Collection Date: 7/24/2014 11:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 09:17 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 01:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 09:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-007

Client Sample ID: MW-85S-059-Q3
Collection Date: 7/24/2014 11:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140729A	QC Batch: R94343				PrepDate		Analyst: RB
Hexavalent Chromium	1.7	0.016	0.20		µg/L	1	7/29/2014 01:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46260				PrepDate	8/5/2014	Analyst: CEI
Chromium	2.0	0.030	1.0		µg/L	1	8/6/2014 10:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-008

Client Sample ID: MW-86D-059-Q3
Collection Date: 7/24/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140730A	QC Batch: R94354				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	7/30/2014 11:05 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	1.9	0.030	1.0		µg/L	1	8/2/2014 09:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-009

Client Sample ID: MW-86S-059-Q3
Collection Date: 7/24/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140730A	QC Batch: R94354				PrepDate		Analyst: RB
Hexavalent Chromium	4.7	0.016	0.20		µg/L	1	7/30/2014 11:35 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	5.5	0.030	1.0		µg/L	1	8/2/2014 09:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94398	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: PBW	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818380						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94398	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: LCSW	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818381						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.196 0.060 0.2000 0 98.1 90 110

Sample ID N013039-017ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818383						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.049 0.060 0.04736 0 20

Sample ID N013039-017AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818384						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.236 0.060 0.2000 0.04736 94.2 90 110

Sample ID N013039-017AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818385						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.239 0.060 0.2000 0.04736 95.7 90 110 0.2358 1.22 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013039-020AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818389						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01731	98.4	90	110				

Sample ID N013039-027AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818391						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.02099	98.2	90	110				

Sample ID N013039-035AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818393						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.060	0.2000	0.02198	94.4	90	110				

Sample ID N013039-038AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818395						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01502	98.9	90	110				

Sample ID N013040-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94398						
Client ID: ZZZZZZ	Batch ID: R94398	TestNo: EPA 218.6		Analysis Date: 7/31/2014	SeqNo: 1818397						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.060	0.2000	0.01554	99.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94399	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: PBW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818406						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.060									
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Sample ID LCS-R94399	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: LCSW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818407						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.195	0.060	0.2000	0	97.3	90	110				
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Sample ID N013040-006ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818409						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.021	0.060						0.01994	0	20	
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Sample ID N013040-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818410						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.207	0.060	0.2000	0.01994	93.3	90	110				
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Sample ID N013056-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818412						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.211	0.060	0.2000	0.01506	97.9	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013056-003AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.204	0.060	0.2000	0.01506	94.7	90	110	0.2108	3.10	20	

Sample ID N013056-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.192	0.060	0.2000	0	96.2	90	110				

Sample ID N013056-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.02227	94.0	90	110				

Sample ID N013055-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.02066	98.1	90	110				

Sample ID N013055-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	99.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013055-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818425						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01650	96.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94343	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: PBW	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815083						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94343	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: LCSW	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815084						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.964	0.20	5.000	0	99.3	90	110				
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Sample ID N013039-045A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815086						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.474	0.20						2.558	3.33	20	
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Sample ID N013039-045A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.523	0.20	5.000	2.558	99.3	90	110				
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Sample ID N013039-046A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	17.781	0.20	5.000	12.79	99.9	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-046A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815090						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	17.813	0.20	5.000	12.79	101	90	110	17.78	0.179	20	

Sample ID N013039-047A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.381	0.20	5.000	2.382	100	90	110				

Sample ID N013040-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815096						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.530	0.20	1.000	0.5651	96.5	90	110				

Sample ID N013040-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815098						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.420	0.20	1.000	2.458	96.2	90	110				

Sample ID N013040-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815100						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.752	0.20	1.000	1.705	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013040-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815102						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.574	0.20	1.000	1.558	102	90	110				

Sample ID N013040-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815104						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110				

Sample ID N013040-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815108						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.029	0.20	1.000	0	103	90	110				

Sample ID N013040-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.733	0.20	1.000	1.746	98.7	90	110				

Sample ID N013054-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815112						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.617	0.20	1.000	0.5769	104	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013039-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94343						
Client ID: ZZZZZZ	Batch ID: R94343	TestNo: EPA 218.6	Analysis Date: 7/29/2014	SeqNo: 1815116							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0	106	90	110				

Qualifiers:

- | | | | | | |
|----|---|--------------------------------------|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | Calculations are based on raw values | | | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94354	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: PBW	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815793						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94354	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: LCSW	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815794						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.842	0.20	5.000	0	96.8	90	110				
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Sample ID N013040-008ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815796						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.365	0.20							1.400	2.55	20
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Sample ID N013040-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815797						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	6.267	0.20	5.000	1.400	97.3	90	110				
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Sample ID N013040-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815799						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.590	0.20	5.000	4.678	98.2	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013040-009A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815800						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.660	0.20	5.000	4.678	99.6	90	110	9.590	0.724	20	

Sample ID N013039-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815801						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.308	0.20	1.000	0.3053	100	90	110				

Sample ID N013056-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.987	0.20	1.000	0	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46187	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46187	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/2/2014	SeqNo: 1818593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46187	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46187	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/2/2014	SeqNo: 1818594						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.174 1.0 10.00 0 102 85 115

Sample ID N013039-047B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/2/2014	SeqNo: 1818603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.259 1.0 10.00 2.745 105 75 125

Sample ID N013039-047B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/2/2014	SeqNo: 1818604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.023 1.0 10.00 2.745 103 75 125 13.26 1.80 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46260	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/5/2014	RunNo: 94443						
Client ID: PBW	Batch ID: 46260	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820083						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46260	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/5/2014	RunNo: 94443						
Client ID: LCSW	Batch ID: 46260	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820084						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.011 1.0 10.00 0 100 85 115

Sample ID N013040-007B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/5/2014	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46260	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820088						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 11.999 1.0 10.00 2.024 99.7 75 125

Sample ID N013040-007B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/5/2014	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46260	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820089						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.028 1.0 10.00 2.024 100 75 125 12.00 0.242 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-001

Client Sample ID: MW-89D-059-Q3
Collection Date: 7/24/2014 12:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140725A** QC Batch: **R94314** PrepDate: Analyst: **PS**
Nitrate as N 6.2 0.051 0.50 mg/L 10 7/25/2014 10:38 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-89S-059-Q3
Lab Order:	N013040	Collection Date:	7/24/2014 11:23:00 AM
Project:	PGE Hinkley, 492581.UR.AU.FW	Matrix:	WATER
Lab ID:	N013040-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140725A	QC Batch: R94314	PrepDate	Analyst: PS
Nitrate as N	48 0.26	2.5 mg/L	50 7/25/2014 10:50 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-003

Client Sample ID: MW-70D-059-Q3
Collection Date: 7/24/2014 1:28:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140725A** QC Batch: **R94314** PrepDate Analyst: **PS**
Nitrate as N 24 0.10 1.0 mg/L 20 7/25/2014 11:03 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** MW-70S-059-Q3
Lab Order: N013040 **Collection Date:** 7/24/2014 12:39:00 PM
Project: PGE Hinkley, 492581.UR.AU.FW **Matrix:** WATER
Lab ID: N013040-004

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140725A** QC Batch: **R94314** PrepDate Analyst: **PS**
Nitrate as N 57 0.26 2.5 mg/L 50 7/25/2014 11:15 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-85D-059-Q3
Lab Order: N013040	Collection Date: 7/24/2014 10:55:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013040-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140725A	QC Batch: R94314	PrepDate	Analyst: PS
Nitrate as N	0.16 0.0051	0.050 mg/L	1 7/25/2014 11:28 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-957-059-Q3
Lab Order: N013040	Collection Date: 7/24/2014 11:05:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013040-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140725A	QC Batch: R94314	PrepDate	Analyst: PS
Nitrate as N	0.20 0.0051	0.050 mg/L	1 7/25/2014 11:41 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-85S-059-Q3
Lab Order: N013040	Collection Date: 7/24/2014 11:44:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013040-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140725A	QC Batch: R94314			PrepDate			Analyst: PS
Nitrate as N	8.8	0.051	0.50		mg/L	10	7/25/2014 11:53 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-008

Client Sample ID: MW-86D-059-Q3
Collection Date: 7/24/2014 2:14:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140725A** QC Batch: **R94314** PrepDate Analyst: **PS**
Nitrate as N 0.57 0.0051 0.050 mg/L 1 7/25/2014 12:06 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 07-Aug-14

CLIENT: CH2M HILL
Lab Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013040-009

Client Sample ID: MW-86S-059-Q3
Collection Date: 7/24/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140725A** QC Batch: **R94314** PrepDate: Analyst: **PS**
Nitrate as N 15 0.051 0.50 mg/L 10 7/25/2014 01:46 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94314_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94314
Client ID: PBW	Batch ID: R94314	TestNo: EPA 300.0		Analysis Date: 7/25/2014	SeqNo: 1813757
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	ND	0.050			
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Sample ID LCS-R94314_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94314
Client ID: LCSW	Batch ID: R94314	TestNo: EPA 300.0		Analysis Date: 7/25/2014	SeqNo: 1813758
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	0.967	0.050	1.000	0	96.7 90 110
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Sample ID N013040-001C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94314
Client ID: ZZZZZ	Batch ID: R94314	TestNo: EPA 300.0		Analysis Date: 7/25/2014	SeqNo: 1813769
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	5.980	0.50			6.210 3.77 20
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Sample ID N013040-001C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94314
Client ID: ZZZZZ	Batch ID: R94314	TestNo: EPA 300.0		Analysis Date: 7/25/2014	SeqNo: 1813770
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	15.830	0.50	10.00	6.210	96.2 80 120
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Sample ID N013040-001C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94314
Client ID: ZZZZZ	Batch ID: R94314	TestNo: EPA 300.0		Analysis Date: 7/25/2014	SeqNo: 1813771
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Nitrate as N	16.020	0.50	10.00	6.210	98.1 80 120 15.83 1.19 20
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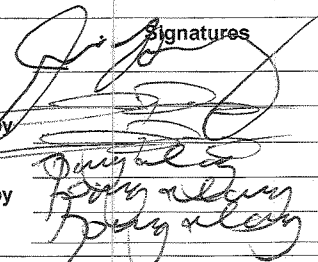
Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



Project Name	Location	Project Number	Project Manager	Sample Manager	Cell Number	Fax Number	Task Order	Project	Turnaround Time	Shipping Date:	COC Number:	Containers						Number of Containers	COMMENTS								
												250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	2x1000 ml Poly										
PGE Hinkley	Hinkley	492581.UR.AU.FW	Jennifer Low	Jim Harvey	(404) 229-2181	(510) 622-9136	59	2014-ATU-059-Q3	10 Days				(NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	HNO3									
												Filtered:	Field	Field	Field	Field	NA	NA									
												Holding Time (days):	28	180	180	2	7	180									
													Cr(VI) (E218.6) FF	Metals Dissolved (6020AFF) FF Cr	Uranium (E200.8FF) FF	Anions (E300.0) FF NO3N	TDS (SM2540C)	Gross Alpha/Beta (SM7110B/E900)									
SAMPLE ID	DATE	TIME	Matrix	X	X	X	X	X	X	X																	
MW-89D-059-Q3	7/24/2014	1208	Water	X	X	X	X	X	X	X																	
MW-89S-059-Q3	7/24/2014	1123	Water	X	X	X	X	X	X	X																	
MW-70D-059-Q3	7/24/2014	1328	Water	X	X	X	X	X	X	X																	
MW-70S-059-Q3	7/24/2014	1239	Water	X	X	X	X	X	X	X																	
MW-85D-059-Q3	7/24/2014	1055	Water	X	X	X	X	X	X	X																	
MW-957-059-Q3	7/24/2014	1105	Water	X	X	X	X	X	X	X																	
MW-85S-059-Q3	7/24/2014	1144	Water	X	X	X	X	X	X	X																	
MW-86D-059-Q3	7/24/2014	1414	Water	X	X	X	X	X	X	X																	
MW-86S-059-Q3	7/24/2014	1515	Water	X	X	X	X	X	X	X																	
												TOTAL NUMBER OF CONTAINERS						54									

NO13040-1
-2
-3
-4
-5
-6
-7
-8
-9

Approved by Sampled by Relinquished by Received by Relinquished by Received by	Signatures 	Date/Time 7/24/14 1721 7/24/14 1721 7/24/14 1721 7/24/14 1721 7/24/14 1721	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 2.9C/3.5C/3.8C Airbill No: IR#2 Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/24/2014 Workorder: N013040
 Rep sample Temp (Deg C): 2.9/3.5/3.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

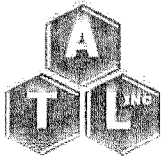
Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC  7/25/2014

Reviewed By:  07/28/14



ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: SIGNED

25-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests	
				EPA 900.0	
N013040-001E	/ MW-89D-059-Q3	7/24/2014 12:08:00 PM	32OZP	1	
N013040-002E	/ MW-89S-059-Q3	7/24/2014 11:23:00 AM	32OZP	1	
N013040-003E	/ MW-70D-059-Q3	7/24/2014 1:28:00 PM	32OZP	1	
N013040-004E	/ MW-70S-059-Q3	7/24/2014 12:39:00 PM	32OZP	1	
N013040-005E	/ MW-85D-059-Q3	7/24/2014 10:55:00 AM	32OZP	1	
N013040-006E	/ MW-957-059-Q3	7/24/2014 11:05:00 AM	32OZP	1	
N013040-007E	/ MW-85S-059-Q3	7/24/2014 11:44:00 AM	32OZP	1	
N013040-008E	/ MW-86D-059-Q3	7/24/2014 2:14:00 PM	32OZP	1	
N013040-009E	/ MW-86S-059-Q3	7/24/2014 3:15:00 PM	32OZP	1	

FedEx #: 7706 9479 8585
 7706 9479 8380
 7706 9479 8890

General Comments:

Please email sample receipt acknowledgement to the PM.
 Please use PO#:N13040A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:
 Normal TAT.
 Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

	Date/Time		Date/Time
Relinquished by: <i>Amandaloto</i>	7/25/14 1700	Received by:	
Relinquished by:		Received by:	

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013040-001D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.8661-61.7253)*1000000}{100}$$

1408 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1400 \text{ mg/L}$$

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/29/2014								TDS/CONDUCTIVITY
Date Finished: 7/30/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46198	100	64.107	64.1075	5	1	5.00		
LCS-46198	100	63.5078	63.6042	964	1	964.00		
N013029-001D	100	63.7955	63.9129	1174	1	1174.00	1593	0.74
N013029-002D	100	62.9916	63.0857	941	1	941.00	1312	0.72
N013029-003D	100	64.2731	64.4002	1271	1	1271.00	1741	0.73
N013029-004D	50	61.3601	61.4842	1241	2	2482.00	3080	0.81
N013029-005D	45	63.7752	63.8889	1137	2.2222222	2526.67	3100	0.82
N013029-006D	100	61.0209	61.0724	515	1	515.00	785	0.66
N013029-007D	30	60.7688	60.9015	1327	3.3333333	4423.33	4700	0.94
N013040-001D	100	61.7253	61.8661	1408	1	1408.00	1840	0.77
N013040-002D	30	59.9071	60.0309	1238	3.3333333	4126.67	4690	0.88
N013040-003D	45	60.6335	60.7608	1273	2.2222222	2828.89	3260	0.87
N013040-004D	25	60.9831	61.1133	1302	4	5208.00	5620	0.93
N013040-005D	100	63.9734	63.9997	263	1	263.00	402	0.65
N013040-005D-DUP	100	63.9932	64.0199	267	1	267.00	402	0.66

mer
7/31/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/30/2014								TDS/CONDUCTIVITY
Date Finished: 7/31/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46206	100	64.1056	64.1058	2	1	2.00		
LCS-46206	100	63.5075	63.6013	938	1	938.00		
N013029-004D	50	63.7765	63.8983	1218	2	2436.00	3080	0.79
N013029-005D	45	64.2735	64.3828	1093	2.2222222	2428.89	3100	0.78
N013029-007D	30	61.3601	61.4806	1205	3.3333333	4016.67	4700	0.85
N013040-002D	30	62.9927	63.1116	1189	3.3333333	3963.33	4690	0.85
N013040-003D	45	63.7985	63.9187	1202	2.2222222	2671.11	3260	0.82
N013040-004D	25	60.7681	60.8939	1258	4	5032.00	5620	0.90
N013040-006D	100	63.9716	63.9953	237	1	237.00	393	0.60
N013040-006D-DUP	100	63.9911	64.0154	243	1	243.00	393	0.62
N013040-007D	45	61.7258	61.8461	1203	2.2222222	2673.33	3270	0.82
N013040-008D	100	59.9055	59.9502	447	1	447.00	718	0.62
N013040-009D	100	60.9821	61.1166	1345	1	1345.00	1821	0.74
N013071-001A	25	60.6314	60.7686	1372	4	5488.00	5330	1.03
N013071-002A	25	64.2518	64.4204	1686	4	6744.00	6120	1.10
N013071-003A	40	61.0211	61.1778	1567	2.5	3917.50	3830	1.02
N013071-004A	40	60.5304	60.6918	1614	2.5	4035.00	3810	1.06
N013071-005A	40	61.1366	61.2877	1511	2.5	3777.50	3710	1.02
N013071-006A	25	60.8364	61.0071	1707	4	6828.00	6280	1.09

NR

J. Lee
7/31/2014

Nancy
for
8/7/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

0.67 = conversion factor

For Sample **N013040-001B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 18.7941822767655 * 1 * (25/25) * 0.67 \\ &= 12.5921021254329 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 13$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013040
Test Method: EPA 200.8
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46194

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013029-001B-DT 5X	Uranium	pCi/L	31.66357281	PASS	31.81669995	0.48%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013029-001B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46194	TestNo: EPA 200.8	Analysis Date: 8/2/2014	SeqNo: 1818672							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	47.839	1.3	13.40	31.82	120	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013040-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.019937 * 1 \\ &= 0.019937\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/7/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013040-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.7458 * 1 \\ &= 1.7458\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.7$$



8/7/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013040-004C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.147 * 50 \\ &= 57.35 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 57$$

 8/7/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013040-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 4.00484348636647 * 1 * (25/25) \\ &= 4.00484348636647 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 4.0$$

 8/7/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013040
Test Method: EPA 6020
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46187

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013039-047B-DT 5X	Chromium	µg/L	2.692022102	NA	2.745431995	1.95%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013040
Test Method: EPA 6020
Analysis Date: 8/6/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46260

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013040-007B-DT 5X	Chromium	µg/L	1.884465593	NA	2.024359448	6.91%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013039-047B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.360	2.0	20.00	2.745	98.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013040
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013040-007B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46260	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820087						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.239	2.0	20.00	2.024	96.1	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values

H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

August 15, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013040
Pace Project No.: 30126324

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on August 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N013040

Pace Project No.: 30126324

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126324001	MW-89D-059-Q3	Water	07/24/14 12:08	08/01/14 08:30
30126324002	MW-89S-059-Q3	Water	07/24/14 11:23	08/01/14 08:30
30126324003	MW-70D-059-Q3	Water	07/24/14 13:28	08/01/14 08:30
30126324004	MW-70S-059-Q3	Water	07/24/14 12:39	08/01/14 08:30
30126324005	MW-85D-059-Q3	Water	07/24/14 10:55	08/01/14 08:30
30126324006	MW-957-059-Q3	Water	07/24/14 11:05	08/01/14 08:30
30126324007	MW-85S-059-Q3	Water	07/24/14 11:44	08/01/14 08:30
30126324008	MW-86D-059-Q3	Water	07/24/14 14:14	08/01/14 08:30
30126324009	MW-86S-059-Q3	Water	07/24/14 15:15	08/01/14 08:30

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SAMPLE ANALYTE COUNT

Project: N013040

Pace Project No.: 30126324

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126324001	MW-89D-059-Q3	EPA 900.0	FCC	2
30126324002	MW-89S-059-Q3	EPA 900.0	FCC	2
30126324003	MW-70D-059-Q3	EPA 900.0	FCC	2
30126324004	MW-70S-059-Q3	EPA 900.0	FCC	2
30126324005	MW-85D-059-Q3	EPA 900.0	FCC	2
30126324006	MW-957-059-Q3	EPA 900.0	FCC	2
30126324007	MW-85S-059-Q3	EPA 900.0	FCC	2
30126324008	MW-86D-059-Q3	EPA 900.0	FCC	2
30126324009	MW-86S-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013040
Pace Project No.: 30126324

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 15, 2014

General Information:

9 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013040
Pace Project No.: 30126324

Sample: MW-89D-059-Q3		Lab ID: 30126324001	Collected: 07/24/14 12:08	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	16.6 ± 4.46	(3.39)	pCi/L	08/07/14 18:27	12587-46-1	
		C:NA	T:NA				
Gross Beta	EPA 900.0	3.87 ± 1.38	(4.00)	pCi/L	08/07/14 18:27	12587-47-2	
		C:NA	T:NA				

Sample: MW-89S-059-Q3		Lab ID: 30126324002	Collected: 07/24/14 11:23	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	74.8 ± 21.7	(24.2)	pCi/L	08/07/14 18:27	12587-46-1	
		C:NA	T:NA				
Gross Beta	EPA 900.0	11.2 ± 7.85	(12.9)	pCi/L	08/07/14 18:27	12587-47-2	
		C:NA	T:NA				

Sample: MW-70D-059-Q3		Lab ID: 30126324003	Collected: 07/24/14 13:28	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	61.8 ± 14.9	(9.36)	pCi/L	08/07/14 21:04	12587-46-1	
		C:NA	T:NA				
Gross Beta	EPA 900.0	20.4 ± 5.31	(5.92)	pCi/L	08/07/14 21:04	12587-47-2	
		C:NA	T:NA				

Sample: MW-70S-059-Q3		Lab ID: 30126324004	Collected: 07/24/14 12:39	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	63.4 ± 17.5	(13.5)	pCi/L	08/07/14 21:04	12587-46-1	
		C:NA	T:NA				
Gross Beta	EPA 900.0	9.48 ± 10.6	(19.0)	pCi/L	08/07/14 21:04	12587-47-2	
		C:NA	T:NA				

Sample: MW-85D-059-Q3		Lab ID: 30126324005	Collected: 07/24/14 10:55	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	3.32 ± 1.86	(3.00)	pCi/L	08/07/14 08:01	12587-46-1	
		C:NA	T:NA				
Gross Beta	EPA 900.0	2.07 ± 0.864	(4.00)	pCi/L	08/07/14 08:01	12587-47-2	
		C:NA	T:NA				

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013040
Pace Project No.: 30126324

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	1.93 ± 1.57 (3.00) C:NA T:NA	pCi/L	08/07/14 08:01	12587-46-1	
Gross Beta		EPA 900.0	1.33 ± 0.743 (4.00) C:NA T:NA	pCi/L	08/07/14 08:01	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	17.2 ± 6.30 (7.46) C:NA T:NA	pCi/L	08/07/14 21:04	12587-46-1	
Gross Beta		EPA 900.0	5.98 ± 3.02 (4.96) C:NA T:NA	pCi/L	08/07/14 21:04	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	7.72 ± 2.95 (3.00) C:NA T:NA	pCi/L	08/07/14 08:02	12587-46-1	
Gross Beta		EPA 900.0	1.66 ± 0.909 (4.00) C:NA T:NA	pCi/L	08/07/14 08:02	12587-47-2	

Parameters		Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha		EPA 900.0	45.4 ± 10.2 (5.75) C:NA T:NA	pCi/L	08/07/14 21:04	12587-46-1	
Gross Beta		EPA 900.0	10.6 ± 2.89 (4.00) C:NA T:NA	pCi/L	08/07/14 21:04	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N013040
Pace Project No.: 30126324

QC Batch:	RADC/20763	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30126324001, 30126324002, 30126324003, 30126324004, 30126324005, 30126324006, 30126324007, 30126324008, 30126324009		

METHOD BLANK:	768345	Matrix:	Water
Associated Lab Samples:	30126324001, 30126324002, 30126324003, 30126324004, 30126324005, 30126324006, 30126324007, 30126324008, 30126324009		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.302 ± 0.568 (1.82) C:NA T:NA	pCi/L	08/07/14 07:47	
Gross Beta	-0.023 ± 0.686 (1.74) C:NA T:NA	pCi/L	08/07/14 07:47	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories
 3151-3153 W Post Rd., Las Vegas, NV 89118
 www.asset-labs.com
 TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
 1638 Roseytown Rd - Suite 2
 Greensburg, PA 15601

TEL: 724.850.5600
 FAX: 724.850.5601
 Acct #:

Field Sampler: SIGNED
30126324
 25-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N013040-001E / MW-89D-059-Q3	Water	7/24/2014 12:08:00 PM	32OZP	1		001
N013040-002E / MW-89S-059-Q3	Water	7/24/2014 11:23:00 AM	32OZP	1		002
N013040-003E / MW-70D-059-Q3	Water	7/24/2014 1:28:00 PM	32OZP	1		003
N013040-004E / MW-70S-059-Q3	Water	7/24/2014 12:39:00 PM	32OZP	1		004
N013040-005E / MW-85D-059-Q3	Water	7/24/2014 10:55:00 AM	32OZP	1		005
N013040-006E / MW-957-059-Q3	Water	7/24/2014 11:05:00 AM	32OZP	1		006
N013040-007E / MW-85S-059-Q3	Water	7/24/2014 11:44:00 AM	32OZP	1		007
N013040-008E / MW-86D-059-Q3	Water	7/24/2014 2:14:00 PM	32OZP	1		008
N013040-009E / MW-86S-059-Q3	Water	7/24/2014 3:15:00 PM	32OZP	1		009

FedEx#: 7706 9479 8585
 7706 9479 8380
 7706 9479 8890

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N13040A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Amal Coote</i> 7/25/14 1700	Date/Time
Relinquished by: _____	Date/Time
Received by: <i>Scott Durkin</i>	Date/Time
Received by: _____	Date/Time



Sample Condition Upon Receipt

Client Name: ATL

Project # 30126324

Courier: [X] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 770694748585

Custody Seal on Cooler/Box Present: [] yes [X] no Seals intact: [] yes [] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: foam

Thermometer Used: NA Type of Ice: Wet Blue. None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: SRA 8-1-14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of checkboxes and text for Chain of Custody, Sample Labels, and Preservation checks.

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature] Date: 8/2/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



30126324

Project Number:

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other
001	15																							
002	15																							

Quality Control Sample Performance Assessment



FCC
Date: 8/6/2014
Worklist: 20763
Matrix: Water
Method: EPA 900 0
SOP: PGH-R-001
MB Sample ID: 768345

Sample Matrix Spike Control Assessment		Gross Alpha		Gross Beta	
Analyte:	Sample Collection Date:	Sample I.D.:	Sample MSD I.D.:	Sample I.D.:	Sample MSD I.D.:
Gross Alpha	7/24/2014	30126324005	30126324005MS	7/24/2014	30126324005
Gross Beta					
MS/MSD Decay Corrected Spike Conc. (pCi/L):					
Spike Volume Used in MS (mL):					
MS Aliquot (L, g, F):					
MS Target Conc. (pCi/L, g, F):					
MSD Target Conc. (pCi/L, g, F):					
MS Spike uncertainty (calculated):					
MSD Spike uncertainty (calculated):					
Sample Result:					
Sample Matrix Spike Result:					
Sample MS 1.96 Sigma Unc.:					
Sample Matrix Spike Duplicate Result:					
Sample MSD 1.96 Sigma Unc.:					
MS % Recovery:					
MSD % Recovery:					
MS Assessment:					
MSD Assessment:					
MS/MSD Upper % Recovery Limits:					
MS/MSD Lower % Recovery Limits:					
Matrix Spike/Matrix Spike Duplicate Sample Assessment					

Method Blank Assessment		LCS		LCSD		LCS		LCSD		LCS		LCSD		Assessment		
Analyte	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment										
Gross Alpha	-0.3020	0.5680	1.8210	0.56300												
Gross Beta	-0.0230	0.6660	1.7430	0.56600												
Laboratory Control Sample Assessment																
		LCS		LCSD		LCS		LCSD		LCS		LCSD				
Analyte:		Gross Alpha		Gross Beta												
Count Date:		8/7/14 7:47		8/7/14 7:47		8/7/14 7:47		8/7/14 7:47		8/7/14 7:47		8/7/14 7:47				
Spike I.D.:		13-048GA		13-048GA		13-047GB		13-047GB		13-047GB		13-047GB				
Spike Concentration (pCi/L):		64.598		64.598		84.532		84.532		84.532		84.532				
Volume Used (mL):		0.050		0.050		0.050		0.050		0.050		0.050				
Aliquot Volume (L, g, F):		0.201		0.202		0.201		0.202		0.201		0.202				
Target Conc. (pCi/L, g, F):		16.041		15.994		20.991		20.990		20.991		20.990				
1.96 Sigma Uncertainty (Calculated):		0.566		0.564		1.275		1.272		1.275		1.272				
Result (pCi/L, g, F):		15.481		15.027		23.876		24.232		23.876		24.232				
1.96 Sigma Unc:		3.853		3.710		4.943		5.004		4.943		5.004				
% Recovery:		96.51%		93.95%		113.74%		115.78%		113.74%		115.78%				
Assessment:		Pass		Pass		Pass		Pass		Pass		Pass				
Upper % Recovery Limits:		121.00%		121.00%		130.00%		130.00%		130.00%		130.00%				
Lower % Recovery Limits:		69.00%		69.00%		79.00%		79.00%		79.00%		79.00%				
Duplicate Sample Assessment																
LCS/LCSD Y or N?:		Y		Y		Y		Y		Y		Y				
Analyte:		Gross Alpha		Gross Beta												
Sample I.D.:		LCS20763		LCS20763		LCS20763		LCS20763		LCS20763		LCS20763				
Duplicate Sample I.D.:		LCS20763		LCS20763		LCS20763		LCS20763		LCS20763		LCS20763				
Sample Result (pCi/L, g, F):		15.4810		23.8760		3.8530		4.9430		3.8530		4.9430				
1.96 Sigma Unc:		3.8530		5.0040		3.8530		5.0040		3.8530		5.0040				
Sample Duplicate Result (pCi/L, g, F):		15.0270		24.2320		5.0040		5.0040		5.0040		5.0040				
Duplicate Sample 1.96 Sigma Unc:		3.7100		5.0040		5.0040		5.0040		5.0040		5.0040				
Either results below MDC?		NO		NO		NO		NO		NO		NO				
Relative Percent Difference:		2.98%		1.48%												
Assessment:		Pass		Pass		Pass		Pass		Pass		Pass				
% RPD Limit:		34.00%		29.00%		29.00%		29.00%		29.00%		29.00%				

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

August 08, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013055

RE: PGE Hinkley, 492581.UR.AU.FW

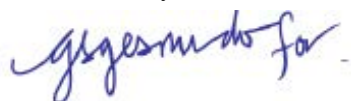
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 25, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013055

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.



ASSET Laboratories

Date: 08-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013055
Contract No: 2014-ATU-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013055-001A	MW-784-059-Q3	Water	7/25/2014 10:50:00 AM	7/25/2014	8/8/2014
N013055-002A	EX-09-059-Q3	Water	7/25/2014 10:36:00 AM	7/25/2014	8/8/2014
N013055-002B	EX-09-059-Q3	Water	7/25/2014 10:36:00 AM	7/25/2014	8/8/2014
N013055-002C	EX-09-059-Q3	Water	7/25/2014 10:36:00 AM	7/25/2014	8/8/2014
N013055-003A	MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	7/25/2014	8/8/2014
N013055-003B	MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	7/25/2014	8/8/2014
N013055-003C	MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	7/25/2014	8/8/2014
N013055-003D	MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	7/25/2014	8/8/2014
N013055-003E	MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	7/25/2014	8/8/2014
N013055-004A	MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	7/25/2014	8/8/2014
N013055-004B	MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	7/25/2014	8/8/2014
N013055-004C	MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	7/25/2014	8/8/2014
N013055-004D	MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	7/25/2014	8/8/2014
N013055-004E	MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	7/25/2014	8/8/2014
N013055-005A	MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	7/25/2014	8/8/2014
N013055-005B	MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	7/25/2014	8/8/2014
N013055-005C	MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	7/25/2014	8/8/2014
N013055-005D	MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	7/25/2014	8/8/2014
N013055-005E	MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	7/25/2014	8/8/2014
N013055-006A	MW-783-059-Q3	Water	7/25/2014 10:03:00 AM	7/25/2014	8/8/2014
N013055-007A	MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	7/25/2014	8/8/2014
N013055-007B	MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	7/25/2014	8/8/2014
N013055-007C	MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	7/25/2014	8/8/2014
N013055-007D	MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	7/25/2014	8/8/2014
N013055-007E	MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	7/25/2014	8/8/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-003

Client Sample ID: MW-22B-059-Q3
Collection Date: 7/25/2014 8:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1100	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-004

Client Sample ID: MW-42B1-059-Q3
Collection Date: 7/25/2014 9:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1300	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-42B2-059-Q3
Lab Order: N013055	Collection Date: 7/25/2014 8:46:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013055-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-007

Client Sample ID: MW-28B-059-Q3
Collection Date: 7/25/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140728D	QC Batch: 46190			PrepDate	7/28/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	820	10	10	mg/L	1	7/28/2014 09:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46190	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337
Client ID: PBW	Batch ID: 46190	TestNo: SM2540C	Analysis Date: 7/28/2014	SeqNo: 1814860	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	ND	10			

Sample ID LCS-46190	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337
Client ID: LCSW	Batch ID: 46190	TestNo: SM2540C	Analysis Date: 7/28/2014	SeqNo: 1814861	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	946.000	10	1000	0	94.6 80 120

Sample ID N013015-007D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 7/28/2014	RunNo: 94337
Client ID: ZZZZZ	Batch ID: 46190	TestNo: SM2540C	Analysis Date: 7/28/2014	SeqNo: 1814863	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids (Residue, Filtera	326.000	10			332.0 1.82 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-002

Client Sample ID: EX-09-059-Q3
Collection Date: 7/25/2014 10:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140804A	QC Batch: 46211			PrepDate	7/31/2014	Analyst: CEI
Uranium	4.4	0.011	0.67	pCi/L	1	8/4/2014 12:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-22B-059-Q3
Lab Order: N013055	Collection Date: 7/25/2014 8:59:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013055-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140804A	QC Batch: 46211			PrepDate	7/31/2014	Analyst: CEI
Uranium	39	0.011	0.67	pCi/L	1	8/4/2014 12:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-42B1-059-Q3
Lab Order: N013055	Collection Date: 7/25/2014 9:23:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013055-004	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140804A	QC Batch: 46211			PrepDate	7/31/2014	Analyst: CEI
Uranium	44	0.011	0.67	pCi/L	1	8/4/2014 01:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-005

Client Sample ID: MW-42B2-059-Q3
Collection Date: 7/25/2014 8:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140804A	QC Batch: 46211			PrepDate	7/31/2014	Analyst: CEI
Uranium	46	0.011	0.67	pCi/L	1	8/4/2014 01:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-28B-059-Q3
Lab Order: N013055	Collection Date: 7/25/2014 8:16:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013055-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140804A	QC Batch: 46211			PrepDate	7/31/2014	Analyst: CEI
Uranium	18	0.011	0.67	pCi/L	1	8/4/2014 01:23 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46211	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/31/2014	RunNo: 94407
Client ID: PBW	Batch ID: 46211	TestNo: EPA 200.8		Analysis Date: 8/4/2014	SeqNo: 1818856
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	ND	0.67			

Sample ID LCS-46211	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/31/2014	RunNo: 94407
Client ID: LCSW	Batch ID: 46211	TestNo: EPA 200.8		Analysis Date: 8/4/2014	SeqNo: 1818857
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	7.357	0.67	6.700	0	110 85 115

Sample ID N013055-002B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/31/2014	RunNo: 94407
Client ID: ZZZZZZ	Batch ID: 46211	TestNo: EPA 200.8		Analysis Date: 8/4/2014	SeqNo: 1818861
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	12.635	0.67	6.700	4.442	122 75 125

Sample ID N013055-002B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 7/31/2014	RunNo: 94407
Client ID: ZZZZZZ	Batch ID: 46211	TestNo: EPA 200.8		Analysis Date: 8/4/2014	SeqNo: 1818862
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Uranium	12.471	0.67	6.700	4.442	120 75 125 12.64 1.31 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-001

Client Sample ID: MW-784-059-Q3
Collection Date: 7/25/2014 10:50:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 11:22 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 01:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-002

Client Sample ID: EX-09-059-Q3
Collection Date: 7/25/2014 10:36:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 11:43 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 02:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/2/2014 10:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-003

Client Sample ID: MW-22B-059-Q3
Collection Date: 7/25/2014 8:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	29	0.032	0.40		µg/L	2	7/29/2014 03:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	29	0.030	1.0		µg/L	1	8/2/2014 10:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-004

Client Sample ID: MW-42B1-059-Q3
Collection Date: 7/25/2014 9:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	33	0.032	0.40		µg/L	2	7/29/2014 02:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	33	0.030	1.0		µg/L	1	8/2/2014 10:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-005

Client Sample ID: MW-42B2-059-Q3
Collection Date: 7/25/2014 8:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	45	0.080	1.0		µg/L	5	7/29/2014 02:56 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	48	0.030	1.0		µg/L	1	8/2/2014 10:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-006

Client Sample ID: MW-783-059-Q3
Collection Date: 7/25/2014 10:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 12:04 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 03:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-007

Client Sample ID: MW-28B-059-Q3
Collection Date: 7/25/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	14	0.016	0.20		µg/L	1	7/29/2014 02:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140802A	QC Batch: 46187				PrepDate	7/29/2014	Analyst: CEI
Chromium	15	0.030	1.0		µg/L	1	8/2/2014 10:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94399	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: PBW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818406
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94399	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: LCSW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818407
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.195 0.060 0.2000 0 97.3 90 110

Sample ID N013040-006ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818409
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.021 0.060 0.01994 0 20

Sample ID N013040-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818410
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.207 0.060 0.2000 0.01994 93.3 90 110

Sample ID N013056-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818412
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium 0.211 0.060 0.2000 0.01506 97.9 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013056-003AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.204	0.060	0.2000	0.01506	94.7	90	110	0.2108	3.10	20	

Sample ID N013056-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.192	0.060	0.2000	0	96.2	90	110				

Sample ID N013056-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.02227	94.0	90	110				

Sample ID N013055-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.02066	98.1	90	110				

Sample ID N013055-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	99.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013055-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818425						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01650	96.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94353	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: PBW	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815745						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94353	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: LCSW	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815748						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.910	0.20	5.000	0	98.2	90	110				
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Sample ID N013056-001ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815748						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.539	0.20						2.555	0.616	20	
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Sample ID N013056-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815749						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	7.442	0.20	5.000	2.555	97.7	90	110				
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Sample ID N013056-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815751						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	12.902	0.20	5.000	7.935	99.3	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013056-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815752						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.681	0.20	5.000	7.935	94.9	90	110	12.90	1.72	20	

Sample ID N013056-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815756						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID N013056-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815758						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.993	0.20	1.000	0.01630	97.7	90	110				

Sample ID N013056-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.699	0.20	5.000	2.784	98.3	90	110				

Sample ID N013056-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.740	0.20	5.000	2.839	98.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013056-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815779						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.052	0.20	5.000	6.198	97.1	90	110				

Sample ID N013055-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.081	0.20	1.000	0	108	90	110				

Sample ID N013055-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815783						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.977	0.20	1.000	0	97.7	90	110				

Sample ID N013055-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815784						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.967	0.20	1.000	0.01820	94.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46187	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: PBW	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818593						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46187	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: LCSW	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818594						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.174 1.0 10.00 0 102 85 115

Sample ID N013039-047B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818603						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.259 1.0 10.00 2.745 105 75 125

Sample ID N013039-047B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94401						
Client ID: ZZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818604						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 13.023 1.0 10.00 2.745 103 75 125 13.26 1.80 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL	Client Sample ID: MW-22B-059-Q3
Lab Order: N013055	Collection Date: 7/25/2014 8:59:00 AM
Project: PGE Hinkley, 492581.UR.AU.FW	Matrix: WATER
Lab ID: N013055-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140726A	QC Batch: R94317			PrepDate			Analyst: PS
Nitrate as N	4.3	0.026	0.25	mg/L	5		7/26/2014 10:37 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-004

Client Sample ID: MW-42B1-059-Q3
Collection Date: 7/25/2014 9:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140726A** QC Batch: **R94317** PrepDate Analyst: **PS**
Nitrate as N 14 0.10 1.0 mg/L 20 7/26/2014 10:50 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-005

Client Sample ID: MW-42B2-059-Q3
Collection Date: 7/25/2014 8:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140726A** QC Batch: **R94317** PrepDate Analyst: **PS**
Nitrate as N 12 0.051 0.50 mg/L 10 7/26/2014 12:32 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013055-007

Client Sample ID: MW-28B-059-Q3
Collection Date: 7/25/2014 8:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140726A** QC Batch: **R94317** PrepDate: Analyst: **PS**
Nitrate as N 9.4 0.026 0.25 mg/L 5 7/26/2014 12:45 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94317_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94317						
Client ID: PBW	Batch ID: R94317	TestNo: EPA 300.0		Analysis Date: 7/26/2014	SeqNo: 1814032						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID LCS-R94317_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94317						
Client ID: LCSW	Batch ID: R94317	TestNo: EPA 300.0		Analysis Date: 7/26/2014	SeqNo: 1814033						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.952 0.050 1.000 0 95.2 90 110

Sample ID N013055-003C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94317						
Client ID: ZZZZZ	Batch ID: R94317	TestNo: EPA 300.0		Analysis Date: 7/26/2014	SeqNo: 1814036						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 4.220 0.25 4.275 1.29 20

Sample ID N013055-003C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94317						
Client ID: ZZZZZ	Batch ID: R94317	TestNo: EPA 300.0		Analysis Date: 7/26/2014	SeqNo: 1814037						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 8.985 0.25 5.000 4.275 94.2 80 120

Sample ID N013055-003C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94317						
Client ID: ZZZZZ	Batch ID: R94317	TestNo: EPA 300.0		Analysis Date: 7/26/2014	SeqNo: 1814040						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 9.055 0.25 5.000 4.275 95.6 80 120 8.985 0.776 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/25/2014 Workorder: N013055
 Rep sample Temp (Deg C): 2.9/3.5 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

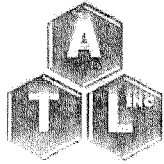
Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Sample MW-42B2-059-Q3 was received at pH 4. Acid added to pH <2.

Checklist Completed B AC  7/28/2014

Reviewed By:  07/29/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: Thanh Hoang

25-Jul-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013055-002C	/ EX-09-059-Q3	Water	7/25/2014 10:36:00 AM	32OZP	1	
N013055-003C	/ MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	32OZP	1	
N013055-004C	/ MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	32OZP	1	
N013055-005C	/ MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	32OZP	1	
N013055-007C	/ MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	32OZP	1	

FedEx #: 7706 9479 8585
7706 9479 8380
7706 9479 8390

General Comments:

Please email sample receipt acknowledgement to the PM.

Please use PO#:N13055A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com
by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Amanda Coste</i>	Date/Time: 7/25/14 1700	Received by: _____	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL

For N013055-003D, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(61.2384-61.1315)*1000000}{100}$$

1069 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 1100 \text{ mg/L}$$


7/29/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (\text{A}-\text{B}) \times 1000000 / \text{C}$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 7/28/2014								TDS/CONDUCTIVITY
Date Finished: 7/29/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46190	100	64.1075	64.1075	0	1	0.00		
LCS-46190	100	63.5093	63.6039	946	1	946.00		
N013015-007D	100	63.9712	64.0044	332	1	332.00	492	0.67
N013015-007D-DUP	100	63.9919	64.0245	326	1	326.00	492	0.66
N013015-008D	100	64.2722	64.3467	745	1	745.00	1101	0.68
N013015-009D	40	62.9935	63.1085	1150	2.5	2875.00	3620	0.79
N013015-010D	100	63.7768	63.8819	1051	1	1051.00	1685	0.62
N013015-011D	30	63.7968	63.9008	1040	3.3333333	3466.67	4350	0.80
N013016-020D	100	61.3575	61.441	835	1	835.00	1182	0.71
N013016-021D	100	60.6311	60.6932	621	1	621.00	908	0.68
N013016-022D	100	60.9807	61.0626	819	1	819.00	1195	0.69
N013016-023D	100	60.7668	60.8494	826	1	826.00	1185	0.70
N013016-024D	100	60.8324	60.9204	880	1	880.00	1314	0.67
N013016-025D	100	61.7261	61.8437	1176	1	1176.00	1674	0.70
N013054-001C	100	60.5305	60.5793	488	1	488.00	771	0.63
N013055-003D	100	61.1315	61.2384	1069	1	1069.00	1552	0.69
N013055-004D	100	64.2518	64.3864	1346	1	1346.00	1855	0.73
N013055-005D	100	59.9055	60.0248	1193	1	1193.00	1700	0.70
N013055-007D	100	61.0168	61.0987	819	1	819.00	1243	0.66

Jmer
7/29/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N013055-002B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 6.6300616992 * 1 * (25/25) * 0.67 \\ &= 4.442141338464 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = \mathbf{4.4}$$

 8/7/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013055
Test Method: EPA 200.8
Analysis Date: 8/4/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46211

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to U. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013055-002B-DT 5X	Uranium	pCi/L	4.260826293	NA	4.442141338	4.08%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013055-002B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94407						
Client ID: ZZZZZ	Batch ID: 46211	TestNo: EPA 200.8	Analysis Date: 8/4/2014	SeqNo: 1818860							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	19.766	1.3	13.40	4.442	114	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013055-006A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.016501 * 1 \\ &= 0.016501\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/8/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For ~~N013055-003A~~ concentration in $\mu\text{g/L}$ is calculated as follows:

N013055-007A

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 14.3775 * 1 \\ &= 14.3775 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 14$$

REB 8/8/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:

$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013055-004C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 0.678 * 20 \\ &= 13.56 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 14$$

 8/7/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013055-004B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 33.4415786390268 * 1 * (25/25) \\ &= 33.4415786390268 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 33$$



8/7/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013055
Test Method: EPA 6020
Analysis Date: 8/2/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46187

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013039-047B-DT 5X	Chromium	µg/L	2.692022102	NA	2.745431995	1.95%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013055
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013039-047B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94401						
Client ID: ZZZZZ	Batch ID: 46187	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/2/2014	SeqNo: 1818602						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.360	2.0	20.00	2.745	98.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

August 15, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013055
Pace Project No.: 30126325

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on August 01, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report reissued 8/15/14 to reflect correction of Sample ID for Sample 005.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N013055

Pace Project No.: 30126325

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30126325001	EX-09-059-Q3	Water	07/25/14 10:36	08/01/14 08:30
30126325002	MW-22B-059-Q3	Water	07/25/14 08:59	08/01/14 08:30
30126325003	MW-42B1-059-Q3	Water	07/25/14 09:23	08/01/14 08:30
30126325004	MW-42B2-059-Q3	Water	07/25/14 08:46	08/01/14 08:30
30126325005	MW-28B-059-Q3	Water	07/25/14 08:16	08/01/14 08:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N013055
Pace Project No.: 30126325

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30126325001	EX-09-059-Q3	EPA 900.0	FCC	2
30126325002	MW-22B-059-Q3	EPA 900.0	FCC	2
30126325003	MW-42B1-059-Q3	EPA 900.0	FCC	2
30126325004	MW-42B2-059-Q3	EPA 900.0	FCC	2
30126325005	MW-28B-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013055
Pace Project No.: 30126325

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: ASSET Laboratories
Date: August 15, 2014

General Information:

5 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N013055
Pace Project No.: 30126325

Sample: EX-09-059-Q3		Lab ID: 30126325001	Collected: 07/25/14 10:36	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	6.99 ± 3.10 (3.00)		pCi/L	08/08/14 08:14	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	2.00 ± 1.29 (4.00)		pCi/L	08/08/14 08:14	12587-47-2	
		C:NA T:NA					

Sample: MW-22B-059-Q3		Lab ID: 30126325002	Collected: 07/25/14 08:59	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	44.9 ± 8.85 (3.00)		pCi/L	08/08/14 13:51	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	6.38 ± 1.84 (4.00)		pCi/L	08/08/14 13:51	12587-47-2	
		C:NA T:NA					

Sample: MW-42B1-059-Q3		Lab ID: 30126325003	Collected: 07/25/14 09:23	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	31.8 ± 6.66 (3.00)		pCi/L	08/08/14 13:51	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	7.83 ± 2.25 (4.00)		pCi/L	08/08/14 13:51	12587-47-2	
		C:NA T:NA					

Sample: MW-42B2-059-Q3		Lab ID: 30126325004	Collected: 07/25/14 08:46	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	45.4 ± 10.5 (7.61)		pCi/L	08/08/14 21:19	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	9.41 ± 2.35 (4.00)		pCi/L	08/08/14 21:19	12587-47-2	
		C:NA T:NA					

Sample: MW-28B-059-Q3		Lab ID: 30126325005	Collected: 07/25/14 08:16	Received: 08/01/14 08:30	Matrix: Water		
PWS:		Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC)	Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	17.0 ± 3.88 (3.00)		pCi/L	08/08/14 13:51	12587-46-1	
		C:NA T:NA					
Gross Beta	EPA 900.0	6.63 ± 1.87 (4.00)		pCi/L	08/08/14 13:51	12587-47-2	
		C:NA T:NA					

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N013055

Pace Project No.: 30126325

QC Batch: RADC/20830

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30126325001, 30126325002, 30126325003, 30126325004, 30126325005

METHOD BLANK: 769982

Matrix: Water

Associated Lab Samples: 30126325001, 30126325002, 30126325003, 30126325004, 30126325005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.010 ± 0.444 (1.27) C:NA T:NA	pCi/L	08/08/14 08:14	
Gross Beta	-1.55 ± 0.770 (2.20) C:NA T:NA	pCi/L	08/08/14 08:14	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.asset-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

30126325

Field Sampler: Thinh Hoang
25-Jul-14

Subcontractor: Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601
TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests	
N013055-002C / EX-09-059-Q3	Water	7/25/2014 10:36:00 AM	32OZP	1		001
N013055-003C / MW-22B-059-Q3	Water	7/25/2014 8:59:00 AM	32OZP	1		002
N013055-004C / MW-42B1-059-Q3	Water	7/25/2014 9:23:00 AM	32OZP	1		003
N013055-005C / MW-42B2-059-Q3	Water	7/25/2014 8:46:00 AM	32OZP	1		004
N013055-007C / MW-28B-059-Q3	Water	7/25/2014 8:16:00 AM	32OZP	1		005

FedEx #: 7706 9479 8585
7706 9479 8380
7706 9479 8390

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N13055A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

Relinquished by: <i>Amanda Cobb</i>	Date/Time: 7/25/14 1700
Relinquished by: <i>Scott Avila</i>	Date/Time: 8-1-14 0830



Sample Condition Upon Receipt

Client Name: ATL

Project # 30126325

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____

Tracking #: 770694748585

Custody Seal on Cooler/Box Present: yes no Seals intact: yes no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap _____ Bubble Bags _____ None _____ Other: foam

Thermometer Used _____ Type of Ice: Wet Blue. None Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: NA °C Correction Factor: NA °C Final Temp.: NA °C

Date and Initials of person examining contents: SRA 8-1-14

Temp should be above freezing to 6°C

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>nt</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>PHL2</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: <u>SEA</u> Lot # of added preservative: _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 8/2/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Project Number: **30126325**

Client Name: ATL

Item No.	Matrix Code	Glass Jar (120 / 250 / 500 / 1L)	Soil kit (2 SB, 1M, soil jar)	Chemistry (250 / 500 / 1L)	Organics (1L)	Nutrient (250 / 500)	Phenolics (250 ml)	TOC (40 ml / 250 ml)	TOX (250 ml)	Total Metals	Dissolved Metals preserved Y	O & G (1L)	TPH (1L)	VOA (40 ml 30 ml)	Cyanide (250 ml)	Sulfide (500 ml)	Bacteria (120 ml)	Wipes / swipe/ smear/ filter	Radchem Nalgene (125 / 250 / 500 / 1L)	Radchem Nalgene (1/2 gal. / 1 gal.L)	Cubtainer (500 ml / 4L)	Ziploc	Other	Other
500	125																							
125	125																							

August 08, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013056

RE: PGE Hinkley, 492581.UR.SW.FW

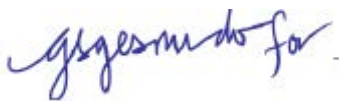
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on July 25, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013056

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (3.563 ug/L) and hexavalent chromium (2.555 ug/L) for sample N013056-001 (MW-28C-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.263 and 2.857 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (3.960 ug/L) and hexavalent chromium (2.784 ug/L) for sample N013056-010 (MW-24A2-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.577 and 2.879 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (3.860 ug/L) and hexavalent chromium (2.839 ug/L) for sample N013056-011 (MW-971-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.712 and 2.601 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 08-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013056
Contract No: 2014-GMP-059-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013056-001A	MW-28C-059-Q3	Water	7/25/2014 8:57:00 AM	7/25/2014	8/8/2014
N013056-001B	MW-28C-059-Q3	Water	7/25/2014 8:57:00 AM	7/25/2014	8/8/2014
N013056-002A	MW-42C-059-Q3	Water	7/25/2014 9:35:00 AM	7/25/2014	8/8/2014
N013056-002B	MW-42C-059-Q3	Water	7/25/2014 9:35:00 AM	7/25/2014	8/8/2014
N013056-003A	MW-90C-059-Q3	Water	7/25/2014 10:21:00 AM	7/25/2014	8/8/2014
N013056-003B	MW-90C-059-Q3	Water	7/25/2014 10:21:00 AM	7/25/2014	8/8/2014
N013056-004A	MW-977-059-Q3	Water	7/25/2014 10:31:00 AM	7/25/2014	8/8/2014
N013056-004B	MW-977-059-Q3	Water	7/25/2014 10:31:00 AM	7/25/2014	8/8/2014
N013056-005A	MW-100C-059-Q3	Water	7/25/2014 8:42:00 AM	7/25/2014	8/8/2014
N013056-005B	MW-100C-059-Q3	Water	7/25/2014 8:42:00 AM	7/25/2014	8/8/2014
N013056-006A	MW-978-059-Q3	Water	7/25/2014 8:52:00 AM	7/25/2014	8/8/2014
N013056-006B	MW-978-059-Q3	Water	7/25/2014 8:52:00 AM	7/25/2014	8/8/2014
N013056-007A	MW-870-059-Q3	Water	7/25/2014 10:40:00 AM	7/25/2014	8/8/2014
N013056-008A	MW-23B-059-Q3	Water	7/25/2014 8:41:00 AM	7/25/2014	8/8/2014
N013056-008B	MW-23B-059-Q3	Water	7/25/2014 8:41:00 AM	7/25/2014	8/8/2014
N013056-009A	MW-23C-059-Q3	Water	7/25/2014 10:14:00 AM	7/25/2014	8/8/2014
N013056-009B	MW-23C-059-Q3	Water	7/25/2014 10:14:00 AM	7/25/2014	8/8/2014
N013056-010A	MW-24A2-059-Q3	Water	7/25/2014 9:49:00 AM	7/25/2014	8/8/2014
N013056-010B	MW-24A2-059-Q3	Water	7/25/2014 9:49:00 AM	7/25/2014	8/8/2014
N013056-011A	MW-971-059-Q3	Water	7/25/2014 9:59:00 AM	7/25/2014	8/8/2014
N013056-011B	MW-971-059-Q3	Water	7/25/2014 9:59:00 AM	7/25/2014	8/8/2014
N013056-012A	MW-24B-059-Q3	Water	7/25/2014 9:28:00 AM	7/25/2014	8/8/2014
N013056-012B	MW-24B-059-Q3	Water	7/25/2014 9:28:00 AM	7/25/2014	8/8/2014



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-001

Client Sample ID: MW-28C-059-Q3
Collection Date: 7/25/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	2.6	0.016	0.20		µg/L	1	7/29/2014 09:22 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.6	0.030	1.0		µg/L	1	8/4/2014 01:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-002

Client Sample ID: MW-42C-059-Q3
Collection Date: 7/25/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	7.9	0.016	0.20		µg/L	1	7/29/2014 09:58 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	8.5	0.030	1.0		µg/L	1	8/4/2014 02:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-003

Client Sample ID: MW-90C-059-Q3
Collection Date: 7/25/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 09:48 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140730A	QC Batch: R94354				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/30/2014 12:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/4/2014 02:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-004

Client Sample ID: MW-977-059-Q3
Collection Date: 7/25/2014 10:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 10:20 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 11:05 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/4/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-005

Client Sample ID: MW-100C-059-Q3
Collection Date: 7/25/2014 8:42:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	19	0.032	0.40		µg/L	2	7/29/2014 01:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	20	0.030	1.0		µg/L	1	8/4/2014 02:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-006

Client Sample ID: MW-978-059-Q3
Collection Date: 7/25/2014 8:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	19	0.032	0.40		µg/L	2	7/29/2014 01:50 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	21	0.030	1.0		µg/L	1	8/4/2014 02:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-007

Client Sample ID: MW-870-059-Q3
Collection Date: 7/25/2014 10:40:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140801A	QC Batch: R94399				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/1/2014 11:01 AM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	7/29/2014 12:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-008

Client Sample ID: MW-23B-059-Q3
Collection Date: 7/25/2014 8:41:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	44	0.080	1.0		µg/L	5	7/29/2014 03:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	47	0.030	1.0		µg/L	1	8/4/2014 02:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-009

Client Sample ID: MW-23C-059-Q3
Collection Date: 7/25/2014 10:14:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	16	0.016	0.20		µg/L	1	7/29/2014 01:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	17	0.030	1.0		µg/L	1	8/4/2014 02:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-010

Client Sample ID: MW-24A2-059-Q3
Collection Date: 7/25/2014 9:49:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/29/2014 01:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/4/2014 02:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-011

Client Sample ID: MW-971-059-Q3
Collection Date: 7/25/2014 9:59:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	2.8	0.016	0.20		µg/L	1	7/29/2014 01:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	3.9	0.030	1.0		µg/L	1	8/4/2014 03:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 08-Aug-14

CLIENT: CH2M HILL
Lab Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013056-012

Client Sample ID: MW-24B-059-Q3
Collection Date: 7/25/2014 9:28:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140729A	QC Batch: R94353				PrepDate		Analyst: RB
Hexavalent Chromium	6.2	0.016	0.20		µg/L	1	7/29/2014 01:31 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140804A	QC Batch: 46188				PrepDate	7/29/2014	Analyst: CEI
Chromium	6.6	0.030	1.0		µg/L	1	8/4/2014 03:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94399	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: PBW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818406
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94399	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: LCSW	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818407
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.195	0.060	0.2000	0	97.3 90 110
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Sample ID N013040-006ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818409
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.021	0.060			0.01994 0 20
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Sample ID N013040-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818410
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.207	0.060	0.2000	0.01994	93.3 90 110
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Sample ID N013056-003AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399
Client ID: ZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818412
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.211	0.060	0.2000	0.01506	97.9 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013056-003AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.204	0.060	0.2000	0.01506	94.7	90	110	0.2108	3.10	20	

Sample ID N013056-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818415						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.192	0.060	0.2000	0	96.2	90	110				

Sample ID N013056-007AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818419						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.02227	94.0	90	110				

Sample ID N013055-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.217	0.060	0.2000	0.02066	98.1	90	110				

Sample ID N013055-002AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6		Analysis Date: 8/1/2014	SeqNo: 1818423						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.198	0.060	0.2000	0	99.2	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013055-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94399						
Client ID: ZZZZZZ	Batch ID: R94399	TestNo: EPA 218.6	Analysis Date: 8/1/2014	SeqNo: 1818425							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01650	96.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013056-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815752						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.681	0.20	5.000	7.935	94.9	90	110	12.90	1.72	20	

Sample ID N013056-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815756						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID N013056-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815758						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.993	0.20	1.000	0.01630	97.7	90	110				

Sample ID N013056-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815777						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.699	0.20	5.000	2.784	98.3	90	110				

Sample ID N013056-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.740	0.20	5.000	2.839	98.0	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013056-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815779						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.052	0.20	5.000	6.198	97.1	90	110				

Sample ID N013055-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.081	0.20	1.000	0	108	90	110				

Sample ID N013055-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815783						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.977	0.20	1.000	0	97.7	90	110				

Sample ID N013055-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94353						
Client ID: ZZZZZZ	Batch ID: R94353	TestNo: EPA 218.6		Analysis Date: 7/29/2014	SeqNo: 1815784						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.967	0.20	1.000	0.01820	94.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013040-009A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815800						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.660	0.20	5.000	4.678	99.6	90	110	9.590	0.724	20	

Sample ID N013039-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815801						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.308	0.20	1.000	0.3053	100	90	110				

Sample ID N013056-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94354						
Client ID: ZZZZZZ	Batch ID: R94354	TestNo: EPA 218.6		Analysis Date: 7/30/2014	SeqNo: 1815805						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.987	0.20	1.000	0	98.7	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46188	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94407						
Client ID: PBW	Batch ID: 46188	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/4/2014	SeqNo: 1818883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46188	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94407						
Client ID: LCSW	Batch ID: 46188	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/4/2014	SeqNo: 1818884						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.704 1.0 10.00 0 107 85 115

Sample ID N013056-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94407						
Client ID: ZZZZZZ	Batch ID: 46188	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/4/2014	SeqNo: 1818888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.105 1.0 10.00 3.563 105 75 125

Sample ID N013056-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 7/29/2014	RunNo: 94407						
Client ID: ZZZZZZ	Batch ID: 46188	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/4/2014	SeqNo: 1818889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 14.294 1.0 10.00 3.563 107 75 125 14.10 1.33 20

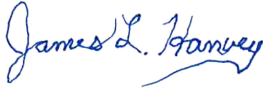
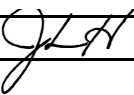
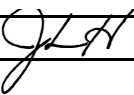
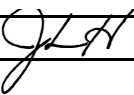
Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	Please change the time for sample MW-977-059-Q3 to 1031. The original Chain of Custody was incorrect. Thanks, Jim Hanvey 14:09 7/25/2014 	Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr	Number of Containers	COMMENTS																																																																																																																																	
<table border="1"> <thead> <tr> <th>SAMPLE ID</th> <th>DATE</th> <th>TIME</th> <th>Matrix</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>MW-28C-059-Q3</td> <td>7/25/2014</td> <td>0857</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-869-059-Q3</td> <td>7/25/2014</td> <td>-----</td> <td>Water</td> <td>X</td> <td>delete</td> <td></td> <td></td> </tr> <tr> <td>MW-42C-059-Q3</td> <td>7/25/2014</td> <td>0935</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-90C-059-Q3</td> <td>7/25/2014</td> <td>1021</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-977-059-Q3</td> <td>7/25/2014</td> <td>*1031*</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-100C-059-Q3</td> <td>7/25/2014</td> <td>0842</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-978-059-Q3</td> <td>7/25/2014</td> <td>0852</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-870-059-Q3</td> <td>7/25/2014</td> <td>1040</td> <td>Water</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MW-23B-059-Q3</td> <td>7/25/2014</td> <td>0841</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-23C-059-Q3</td> <td>7/25/2014</td> <td>1014</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-24A2-059-Q3</td> <td>7/25/2014</td> <td>0949</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-971-059-Q3</td> <td>7/25/2014</td> <td>0959</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>MW-24B-059-Q3</td> <td>7/25/2014</td> <td>0928</td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	SAMPLE ID	DATE	TIME	Matrix									MW-28C-059-Q3	7/25/2014	0857	Water	X	X			MW-869-059-Q3	7/25/2014	-----	Water	X	delete			MW-42C-059-Q3	7/25/2014	0935	Water	X	X			MW-90C-059-Q3	7/25/2014	1021	Water	X	X			MW-977-059-Q3	7/25/2014	*1031*	Water	X	X			MW-100C-059-Q3	7/25/2014	0842	Water	X	X			MW-978-059-Q3	7/25/2014	0852	Water	X	X			MW-870-059-Q3	7/25/2014	1040	Water	X				MW-23B-059-Q3	7/25/2014	0841	Water	X	X			MW-23C-059-Q3	7/25/2014	1014	Water	X	X			MW-24A2-059-Q3	7/25/2014	0949	Water	X	X			MW-971-059-Q3	7/25/2014	0959	Water	X	X			MW-24B-059-Q3	7/25/2014	0928	Water	X	X																								
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MW-24B-059-Q3	7/25/2014	0928	Water	X	X																																																																																																																																					

TOTAL NUMBER OF CONTAINERS **23**

Approved by _____ Sampled by _____ Relinquished by _____ Received by _____ Relinquished by _____ Received by _____	Signatures Date/Time	Shipping Details Method of Shipment: On Ice: yes / no Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.SW.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-GMP-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2, SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	Number of Containers	COMMENTS		
Cr(VI) (E218.6) FF Metals Dissolved (6020AFF) FF Cr									
SAMPLE ID	DATE	TIME	Matrix						
MW-28C-059-Q3	7/25/2014	0857	Water	x	x				
MW-869-059-Q3	7/25/2014		Water	x	delete				
MW-42C-059-Q3	7/25/2014	0935	Water	x	x				
MW-90C-059-Q3	7/25/2014	1021	Water	x	x				
MW-977-059-Q3	7/25/2014	0931	Water	x	x				
MW-100C-059-Q3	7/25/2014	0842	Water	x	x				
MW-978-059-Q3	7/25/2014	0852	Water	x	x				
MW-870-059-Q3	7/25/2014	1040	Water	x					
MW-23B-059-Q3	7/25/2014	0841	Water	x	x				
MW-23C-059-Q3	7/25/2014	1014	Water	x	x				
MW-24A2-059-Q3	7/25/2014	0949	Water	x	x				
MW-971-059-Q3	7/25/2014	0959	Water	x	x				
MW-24B-059-Q3	7/25/2014	0928	Water	x	x				
TOTAL NUMBER OF CONTAINERS								23	

Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 7-25-14 1205 7/25/14/1205 7/25/14/1205 7/25/14/1205 7/25/14/1205 7/25/14/1516	Shipping Details Method of Shipment: On Ice: <input checked="" type="radio"/> yes / no 3.7°C Airbill No: <i>[Signature]</i> Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 7/25/2014 Workorder: N013056
 Rep sample Temp (Deg C): 3.2 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC  7/28/2014

Reviewed By:  07/29/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * DF$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013056-007A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.022268 * 1 \\ &= 0.022268\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/8/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013056-009A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned} \text{Cr}^{+6}, \mu\text{g/L} &= 16.4278 * 1 \\ &= 16.4278 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 16$$

Nancy 8/8/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013056-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.5631177772 * 1 * (25/25) \\ &= 3.5631177772 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.6$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013056
Test Method: EPA 6020
Analysis Date: 8/4/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46188

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013056-001B-DT 5X	Chromium	µg/L	3.580722008	NA	3.563117777	0.49%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013056
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013056-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94407						
Client ID: ZZZZZ	Batch ID: 46188	TestNo: EPA 6020 EPA 3010A	Analysis Date: 8/4/2014	SeqNo: 1818887							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	23.460	2.0	20.00	3.563	99.5	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 18, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013108

RE: PGE Hinkley, 492581.UR.IR.FW

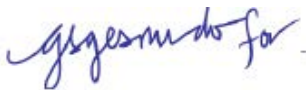
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on August 04, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Dilution was necessary for Orthophosphate, Dissolved (as P) on samples N013108-011, N013108-027 due to precipitation upon the addition of eluent.

Matrix Spike Duplicate (MSD) on QC sample N013108-015C-MSD is outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B_Dissolved:

RPD for Matrix Spike(MS) and Matrix Spike Duplicate(MSD) on QC samples N013108-002B-MS and N013108-002B-MSD is outside criteria for Iron ; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on QC samples N013108-025B-MS and N013108-025B-MSD are outside recovery criteria for Chromium since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Because the results for total dissolved chromium (4.674 ug/L) and hexavalent chromium (1.566 ug/L) for sample N013108-010 (SA-MW-30S-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108

CASE NARRATIVE

chromium. The results from the redigested samples were 4.199 and 4.2 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.



ASSET Laboratories

Date: 18-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013108-001A	CA-MW-601-059-Q3	Water	8/4/2014 12:17:00 PM	8/4/2014	8/18/2014
N013108-001B	CA-MW-601-059-Q3	Water	8/4/2014 12:17:00 PM	8/4/2014	8/18/2014
N013108-001C	CA-MW-601-059-Q3	Water	8/4/2014 12:17:00 PM	8/4/2014	8/18/2014
N013108-001D	CA-MW-601-059-Q3	Water	8/4/2014 12:17:00 PM	8/4/2014	8/18/2014
N013108-002A	CA-MW-602-059-Q3	Water	8/4/2014 12:54:00 PM	8/4/2014	8/18/2014
N013108-002B	CA-MW-602-059-Q3	Water	8/4/2014 12:54:00 PM	8/4/2014	8/18/2014
N013108-002C	CA-MW-602-059-Q3	Water	8/4/2014 12:54:00 PM	8/4/2014	8/18/2014
N013108-002D	CA-MW-602-059-Q3	Water	8/4/2014 12:54:00 PM	8/4/2014	8/18/2014
N013108-003A	MW-907-059-Q3	Water	8/4/2014 1:04:00 PM	8/4/2014	8/18/2014
N013108-003B	MW-907-059-Q3	Water	8/4/2014 1:04:00 PM	8/4/2014	8/18/2014
N013108-003C	MW-907-059-Q3	Water	8/4/2014 1:04:00 PM	8/4/2014	8/18/2014
N013108-003D	MW-907-059-Q3	Water	8/4/2014 1:04:00 PM	8/4/2014	8/18/2014
N013108-004A	CA-MW-603-059-Q3	Water	8/4/2014 1:44:00 PM	8/4/2014	8/18/2014
N013108-004B	CA-MW-603-059-Q3	Water	8/4/2014 1:44:00 PM	8/4/2014	8/18/2014
N013108-004C	CA-MW-603-059-Q3	Water	8/4/2014 1:44:00 PM	8/4/2014	8/18/2014
N013108-004D	CA-MW-603-059-Q3	Water	8/4/2014 1:44:00 PM	8/4/2014	8/18/2014
N013108-005A	MW-701-059-Q3	Water	8/4/2014 4:29:00 PM	8/4/2014	8/18/2014
N013108-006A	MW-702-059-Q3	Water	8/4/2014 5:00:00 PM	8/4/2014	8/18/2014
N013108-007A	SA-MW-29D-059-Q3	Water	8/4/2014 3:04:00 PM	8/4/2014	8/18/2014
N013108-007B	SA-MW-29D-059-Q3	Water	8/4/2014 3:04:00 PM	8/4/2014	8/18/2014
N013108-007C	SA-MW-29D-059-Q3	Water	8/4/2014 3:04:00 PM	8/4/2014	8/18/2014
N013108-007D	SA-MW-29D-059-Q3	Water	8/4/2014 3:04:00 PM	8/4/2014	8/18/2014
N013108-008A	SA-MW-29S-059-Q3	Water	8/4/2014 3:36:00 PM	8/4/2014	8/18/2014
N013108-008B	SA-MW-29S-059-Q3	Water	8/4/2014 3:36:00 PM	8/4/2014	8/18/2014
N013108-008C	SA-MW-29S-059-Q3	Water	8/4/2014 3:36:00 PM	8/4/2014	8/18/2014
N013108-008D	SA-MW-29S-059-Q3	Water	8/4/2014 3:36:00 PM	8/4/2014	8/18/2014
N013108-009A	SA-MW-30D-059-Q3	Water	8/4/2014 1:07:00 PM	8/4/2014	8/18/2014
N013108-009B	SA-MW-30D-059-Q3	Water	8/4/2014 1:07:00 PM	8/4/2014	8/18/2014
N013108-009C	SA-MW-30D-059-Q3	Water	8/4/2014 1:07:00 PM	8/4/2014	8/18/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013108-009D	SA-MW-30D-059-Q3	Water	8/4/2014 1:07:00 PM	8/4/2014	8/18/2014
N013108-010A	SA-MW-30S-059-Q3	Water	8/4/2014 1:39:00 PM	8/4/2014	8/18/2014
N013108-010B	SA-MW-30S-059-Q3	Water	8/4/2014 1:39:00 PM	8/4/2014	8/18/2014
N013108-010C	SA-MW-30S-059-Q3	Water	8/4/2014 1:39:00 PM	8/4/2014	8/18/2014
N013108-010D	SA-MW-30S-059-Q3	Water	8/4/2014 1:39:00 PM	8/4/2014	8/18/2014
N013108-011A	CA-MW-317D-059-Q3	Water	8/4/2014 3:30:00 PM	8/4/2014	8/18/2014
N013108-011B	CA-MW-317D-059-Q3	Water	8/4/2014 3:30:00 PM	8/4/2014	8/18/2014
N013108-011C	CA-MW-317D-059-Q3	Water	8/4/2014 3:30:00 PM	8/4/2014	8/18/2014
N013108-011D	CA-MW-317D-059-Q3	Water	8/4/2014 3:30:00 PM	8/4/2014	8/18/2014
N013108-012A	CA-MW-317S-059-Q3	Water	8/4/2014 3:45:00 PM	8/4/2014	8/18/2014
N013108-012B	CA-MW-317S-059-Q3	Water	8/4/2014 3:45:00 PM	8/4/2014	8/18/2014
N013108-012C	CA-MW-317S-059-Q3	Water	8/4/2014 3:45:00 PM	8/4/2014	8/18/2014
N013108-012D	CA-MW-317S-059-Q3	Water	8/4/2014 3:45:00 PM	8/4/2014	8/18/2014
N013108-013A	MW-903-059-Q3	Water	8/4/2014 3:55:00 PM	8/4/2014	8/18/2014
N013108-013B	MW-903-059-Q3	Water	8/4/2014 3:55:00 PM	8/4/2014	8/18/2014
N013108-013C	MW-903-059-Q3	Water	8/4/2014 3:55:00 PM	8/4/2014	8/18/2014
N013108-013D	MW-903-059-Q3	Water	8/4/2014 3:55:00 PM	8/4/2014	8/18/2014
N013108-014A	CA-MW-401-059-Q3	Water	8/4/2014 1:59:00 PM	8/4/2014	8/18/2014
N013108-014B	CA-MW-401-059-Q3	Water	8/4/2014 1:59:00 PM	8/4/2014	8/18/2014
N013108-014C	CA-MW-401-059-Q3	Water	8/4/2014 1:59:00 PM	8/4/2014	8/18/2014
N013108-014D	CA-MW-401-059-Q3	Water	8/4/2014 1:59:00 PM	8/4/2014	8/18/2014
N013108-015A	CA-MW-402D-059-Q3	Water	8/4/2014 1:02:00 PM	8/4/2014	8/18/2014
N013108-015B	CA-MW-402D-059-Q3	Water	8/4/2014 1:02:00 PM	8/4/2014	8/18/2014
N013108-015C	CA-MW-402D-059-Q3	Water	8/4/2014 1:02:00 PM	8/4/2014	8/18/2014
N013108-015D	CA-MW-402D-059-Q3	Water	8/4/2014 1:02:00 PM	8/4/2014	8/18/2014
N013108-016A	CA-MW-402S-059-Q3	Water	8/4/2014 12:11:00 PM	8/4/2014	8/18/2014
N013108-016B	CA-MW-402S-059-Q3	Water	8/4/2014 12:11:00 PM	8/4/2014	8/18/2014
N013108-016C	CA-MW-402S-059-Q3	Water	8/4/2014 12:11:00 PM	8/4/2014	8/18/2014
N013108-016D	CA-MW-402S-059-Q3	Water	8/4/2014 12:11:00 PM	8/4/2014	8/18/2014
N013108-017A	CA-MW-403S-059-Q3	Water	8/4/2014 11:09:00 AM	8/4/2014	8/18/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013108-017B	CA-MW-403S-059-Q3	Water	8/4/2014 11:09:00 AM	8/4/2014	8/18/2014
N013108-017C	CA-MW-403S-059-Q3	Water	8/4/2014 11:09:00 AM	8/4/2014	8/18/2014
N013108-017D	CA-MW-403S-059-Q3	Water	8/4/2014 11:09:00 AM	8/4/2014	8/18/2014
N013108-018A	MW-703-059-Q3	Water	8/4/2014 10:20:00 AM	8/4/2014	8/18/2014
N013108-019A	CA-MW-506D-059-Q3	Water	8/4/2014 3:07:00 PM	8/4/2014	8/18/2014
N013108-019B	CA-MW-506D-059-Q3	Water	8/4/2014 3:07:00 PM	8/4/2014	8/18/2014
N013108-019C	CA-MW-506D-059-Q3	Water	8/4/2014 3:07:00 PM	8/4/2014	8/18/2014
N013108-019D	CA-MW-506D-059-Q3	Water	8/4/2014 3:07:00 PM	8/4/2014	8/18/2014
N013108-020A	CA-MW-506S-059-Q3	Water	8/4/2014 3:53:00 PM	8/4/2014	8/18/2014
N013108-020B	CA-MW-506S-059-Q3	Water	8/4/2014 3:53:00 PM	8/4/2014	8/18/2014
N013108-020C	CA-MW-506S-059-Q3	Water	8/4/2014 3:53:00 PM	8/4/2014	8/18/2014
N013108-020D	CA-MW-506S-059-Q3	Water	8/4/2014 3:53:00 PM	8/4/2014	8/18/2014
N013108-021A	MW-906-059-Q3	Water	8/4/2014 4:03:00 PM	8/4/2014	8/18/2014
N013108-021B	MW-906-059-Q3	Water	8/4/2014 4:03:00 PM	8/4/2014	8/18/2014
N013108-021C	MW-906-059-Q3	Water	8/4/2014 4:03:00 PM	8/4/2014	8/18/2014
N013108-021D	MW-906-059-Q3	Water	8/4/2014 4:03:00 PM	8/4/2014	8/18/2014
N013108-022A	MW-704-059-Q3	Water	8/4/2014 11:30:00 AM	8/4/2014	8/18/2014
N013108-023A	SC-MW-11D-059-Q3	Water	8/4/2014 11:15:00 AM	8/4/2014	8/18/2014
N013108-023B	SC-MW-11D-059-Q3	Water	8/4/2014 11:15:00 AM	8/4/2014	8/18/2014
N013108-023C	SC-MW-11D-059-Q3	Water	8/4/2014 11:15:00 AM	8/4/2014	8/18/2014
N013108-023D	SC-MW-11D-059-Q3	Water	8/4/2014 11:15:00 AM	8/4/2014	8/18/2014
N013108-024A	SC-MW-12D-059-Q3	Water	8/4/2014 12:13:00 PM	8/4/2014	8/18/2014
N013108-024B	SC-MW-12D-059-Q3	Water	8/4/2014 12:13:00 PM	8/4/2014	8/18/2014
N013108-024C	SC-MW-12D-059-Q3	Water	8/4/2014 12:13:00 PM	8/4/2014	8/18/2014
N013108-024D	SC-MW-12D-059-Q3	Water	8/4/2014 12:13:00 PM	8/4/2014	8/18/2014
N013108-025A	SC-MW-12S-059-Q3	Water	8/4/2014 12:47:00 PM	8/4/2014	8/18/2014
N013108-025B	SC-MW-12S-059-Q3	Water	8/4/2014 12:47:00 PM	8/4/2014	8/18/2014
N013108-025C	SC-MW-12S-059-Q3	Water	8/4/2014 12:47:00 PM	8/4/2014	8/18/2014
N013108-025D	SC-MW-12S-059-Q3	Water	8/4/2014 12:47:00 PM	8/4/2014	8/18/2014
N013108-026A	SC-MW-13D-059-Q3	Water	8/4/2014 1:35:00 PM	8/4/2014	8/18/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013108-026B	SC-MW-13D-059-Q3	Water	8/4/2014 1:35:00 PM	8/4/2014	8/18/2014
N013108-026C	SC-MW-13D-059-Q3	Water	8/4/2014 1:35:00 PM	8/4/2014	8/18/2014
N013108-026D	SC-MW-13D-059-Q3	Water	8/4/2014 1:35:00 PM	8/4/2014	8/18/2014
N013108-027A	SC-MW-13S-059-Q3	Water	8/4/2014 2:16:00 PM	8/4/2014	8/18/2014
N013108-027B	SC-MW-13S-059-Q3	Water	8/4/2014 2:16:00 PM	8/4/2014	8/18/2014
N013108-027C	SC-MW-13S-059-Q3	Water	8/4/2014 2:16:00 PM	8/4/2014	8/18/2014
N013108-027D	SC-MW-13S-059-Q3	Water	8/4/2014 2:16:00 PM	8/4/2014	8/18/2014
N013108-028A	CA-MW-303S-059-Q3	Water	8/4/2014 11:11:00 AM	8/4/2014	8/18/2014
N013108-028B	CA-MW-303S-059-Q3	Water	8/4/2014 11:11:00 AM	8/4/2014	8/18/2014
N013108-028C	CA-MW-303S-059-Q3	Water	8/4/2014 11:11:00 AM	8/4/2014	8/18/2014
N013108-028D	CA-MW-303S-059-Q3	Water	8/4/2014 11:11:00 AM	8/4/2014	8/18/2014
N013108-029A	CA-MW-304-059-Q3	Water	8/4/2014 12:05:00 PM	8/4/2014	8/18/2014
N013108-029B	CA-MW-304-059-Q3	Water	8/4/2014 12:05:00 PM	8/4/2014	8/18/2014
N013108-029C	CA-MW-304-059-Q3	Water	8/4/2014 12:05:00 PM	8/4/2014	8/18/2014
N013108-029D	CA-MW-304-059-Q3	Water	8/4/2014 12:05:00 PM	8/4/2014	8/18/2014
N013108-030A	CA-MW-305-059-Q3	Water	8/4/2014 12:51:00 PM	8/4/2014	8/18/2014
N013108-030B	CA-MW-305-059-Q3	Water	8/4/2014 12:51:00 PM	8/4/2014	8/18/2014
N013108-030C	CA-MW-305-059-Q3	Water	8/4/2014 12:51:00 PM	8/4/2014	8/18/2014
N013108-030D	CA-MW-305-059-Q3	Water	8/4/2014 12:51:00 PM	8/4/2014	8/18/2014
N013108-031A	CA-MW-306D-059-Q3	Water	8/4/2014 2:39:00 PM	8/4/2014	8/18/2014
N013108-031B	CA-MW-306D-059-Q3	Water	8/4/2014 2:39:00 PM	8/4/2014	8/18/2014
N013108-031C	CA-MW-306D-059-Q3	Water	8/4/2014 2:39:00 PM	8/4/2014	8/18/2014
N013108-031D	CA-MW-306D-059-Q3	Water	8/4/2014 2:39:00 PM	8/4/2014	8/18/2014
N013108-032A	CA-MW-306S-059-Q3	Water	8/4/2014 2:01:00 PM	8/4/2014	8/18/2014
N013108-032B	CA-MW-306S-059-Q3	Water	8/4/2014 2:01:00 PM	8/4/2014	8/18/2014
N013108-032C	CA-MW-306S-059-Q3	Water	8/4/2014 2:01:00 PM	8/4/2014	8/18/2014
N013108-032D	CA-MW-306S-059-Q3	Water	8/4/2014 2:01:00 PM	8/4/2014	8/18/2014
N013108-033A	CA-MW-307S-059-Q3	Water	8/4/2014 3:29:00 PM	8/4/2014	8/18/2014
N013108-033B	CA-MW-307S-059-Q3	Water	8/4/2014 3:29:00 PM	8/4/2014	8/18/2014
N013108-033C	CA-MW-307S-059-Q3	Water	8/4/2014 3:29:00 PM	8/4/2014	8/18/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013108
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013108-033D	CA-MW-307S-059-Q3	Water	8/4/2014 3:29:00 PM	8/4/2014	8/18/2014
N013108-034A	MW-705-059-Q3	Water	8/4/2014 1:05:00 PM	8/4/2014	8/18/2014



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-001

Client Sample ID: CA-MW-601-059-Q3
Collection Date: 8/4/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	7.2	0.016	0.20		µg/L	1	8/5/2014 02:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	7.4	0.030	1.0		µg/L	1	8/6/2014 02:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-002

Client Sample ID: CA-MW-602-059-Q3
Collection Date: 8/4/2014 12:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	3.6	0.016	0.20		µg/L	1	8/5/2014 02:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	4.2	0.030	1.0		µg/L	1	8/6/2014 03:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-003

Client Sample ID: MW-907-059-Q3
Collection Date: 8/4/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	3.6	0.016	0.20		µg/L	1	8/5/2014 03:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	4.0	0.030	1.0		µg/L	1	8/6/2014 03:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-004

Client Sample ID: CA-MW-603-059-Q3
Collection Date: 8/4/2014 1:44:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	4.0	0.016	0.20		µg/L	1	8/5/2014 03:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	4.6	0.030	1.0		µg/L	1	8/6/2014 03:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-005

Client Sample ID: MW-701-059-Q3
Collection Date: 8/4/2014 4:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140808A	QC Batch: R94512				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/8/2014 01:24 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 03:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-006

Client Sample ID: MW-702-059-Q3
Collection Date: 8/4/2014 5:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140808A	QC Batch: R94512				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/8/2014 01:55 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 03:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-007

Client Sample ID: SA-MW-29D-059-Q3
Collection Date: 8/4/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 04:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140807A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/7/2014 12:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-008

Client Sample ID: SA-MW-29S-059-Q3
Collection Date: 8/4/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 05:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 03:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-009

Client Sample ID: SA-MW-30D-059-Q3
Collection Date: 8/4/2014 1:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	2500	3.2	40		µg/L	200	8/5/2014 05:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140807A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	2800	0.76	25		µg/L	25	8/7/2014 12:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-010

Client Sample ID: SA-MW-30S-059-Q3
Collection Date: 8/4/2014 1:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	8/5/2014 05:29 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140807A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	4.7	0.030	1.0		µg/L	1	8/7/2014 12:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-011

Client Sample ID: CA-MW-317D-059-Q3
Collection Date: 8/4/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	4.9	0.016	0.20		µg/L	1	8/5/2014 07:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	5.7	0.030	1.0		µg/L	1	8/6/2014 03:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-012

Client Sample ID: CA-MW-317S-059-Q3
Collection Date: 8/4/2014 3:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	4.6	0.016	0.20		µg/L	1	8/5/2014 07:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	5.0	0.030	1.0		µg/L	1	8/6/2014 04:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-013

Client Sample ID: MW-903-059-Q3
Collection Date: 8/4/2014 3:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	4.2	0.016	0.20		µg/L	1	8/5/2014 08:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	4.8	0.030	1.0		µg/L	1	8/6/2014 04:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-014

Client Sample ID: CA-MW-401-059-Q3
Collection Date: 8/4/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140805A	QC Batch: R94461				PrepDate		Analyst: RB
Hexavalent Chromium	0.91	0.016	0.20		µg/L	1	8/5/2014 08:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	8/6/2014 04:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-015

Client Sample ID: CA-MW-402D-059-Q3
Collection Date: 8/4/2014 1:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 11:25 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 04:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-016

Client Sample ID: CA-MW-402S-059-Q3
Collection Date: 8/4/2014 12:11:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	40	0.080	1.0		µg/L	5	8/5/2014 05:07 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	39	0.030	1.0		µg/L	1	8/6/2014 04:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-017

Client Sample ID: CA-MW-403S-059-Q3
Collection Date: 8/4/2014 11:09:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	2.5	0.016	0.20		µg/L	1	8/5/2014 11:55 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	2.8	0.030	1.0		µg/L	1	8/6/2014 04:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-018

Client Sample ID: MW-703-059-Q3
Collection Date: 8/4/2014 10:20:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140808A	QC Batch: R94512				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/8/2014 02:39 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 12:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-019

Client Sample ID: CA-MW-506D-059-Q3
Collection Date: 8/4/2014 3:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	13	0.016	0.20		µg/L	1	8/5/2014 01:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	14	0.030	1.0		µg/L	1	8/6/2014 04:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-020

Client Sample ID: CA-MW-506S-059-Q3
Collection Date: 8/4/2014 3:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	8/5/2014 01:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	8/6/2014 04:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-021

Client Sample ID: MW-906-059-Q3
Collection Date: 8/4/2014 4:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	2.9	0.016	0.20		µg/L	1	8/5/2014 06:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	8/6/2014 04:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-022

Client Sample ID: MW-704-059-Q3
Collection Date: 8/4/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 08:18 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-023

Client Sample ID: SC-MW-11D-059-Q3
Collection Date: 8/4/2014 11:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 01:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 04:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-024

Client Sample ID: SC-MW-12D-059-Q3
Collection Date: 8/4/2014 12:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 02:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 05:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-025

Client Sample ID: SC-MW-12S-059-Q3
Collection Date: 8/4/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	330	0.80	10		µg/L	50	8/5/2014 05:26 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	340	0.15	5.0		µg/L	5	8/6/2014 12:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-026

Client Sample ID: SC-MW-13D-059-Q3
Collection Date: 8/4/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	1.2	0.016	0.20		µg/L	1	8/5/2014 06:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	8/6/2014 01:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-027

Client Sample ID: SC-MW-13S-059-Q3
Collection Date: 8/4/2014 2:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462						Analyst: RB
Hexavalent Chromium	110	0.16	2.0		µg/L	10	8/5/2014 05:36 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254					8/6/2014	Analyst: CEI
Chromium	120	0.030	1.0		µg/L	1	8/6/2014 01:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-028

Client Sample ID: CA-MW-303S-059-Q3
Collection Date: 8/4/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	0.20	0.016	0.20		µg/L	1	8/5/2014 03:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 01:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-029

Client Sample ID: CA-MW-304-059-Q3
Collection Date: 8/4/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	19	0.032	0.40		µg/L	2	8/5/2014 05:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	18	0.030	1.0		µg/L	1	8/6/2014 02:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-030

Client Sample ID: CA-MW-305-059-Q3
Collection Date: 8/4/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	0.63	0.016	0.20		µg/L	1	8/5/2014 03:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	8/6/2014 02:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-031

Client Sample ID: CA-MW-306D-059-Q3
Collection Date: 8/4/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462						Analyst: RB
Hexavalent Chromium	47	0.16	2.0		µg/L	10	8/5/2014 05:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254					8/6/2014	Analyst: CEI
Chromium	46	0.030	1.0		µg/L	1	8/6/2014 02:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-032

Client Sample ID: CA-MW-306S-059-Q3
Collection Date: 8/4/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	1.3	0.016	0.20		µg/L	1	8/5/2014 07:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/6/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-033

Client Sample ID: CA-MW-307S-059-Q3
Collection Date: 8/4/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 04:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254				PrepDate	8/6/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/6/2014 02:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-034

Client Sample ID: MW-705-059-Q3
Collection Date: 8/4/2014 1:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140808A	QC Batch: R94512				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/8/2014 02:59 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140805A	QC Batch: R94462				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/5/2014 04:49 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94512	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512
Client ID: PBW	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823056
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			
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Sample ID LCS-R94512	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512
Client ID: LCSW	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823057
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.210	0.060	0.2000	0	105 90 110
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Sample ID N013107-005ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512
Client ID: ZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823059
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	ND	0.060			0.01259 0 20
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Sample ID N013107-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512
Client ID: ZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823060
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.195	0.060	0.2000	0.01259	91.1 90 110
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Sample ID N013108-005AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512
Client ID: ZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823062
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Hexavalent Chromium	0.200	0.060	0.2000	0	99.8 90 110
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013108-005AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512						
Client ID: ZZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823063						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0	105	90	110	0.1996	4.86	20	

Sample ID N013108-006AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512						
Client ID: ZZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823065						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.6	90	110				

Sample ID N013108-018AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512						
Client ID: ZZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823069						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.195	0.060	0.2000	0	97.7	90	110				

Sample ID N013108-034AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94512						
Client ID: ZZZZZZ	Batch ID: R94512	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1823071						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0.01468	91.3	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013108-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01964	96.5	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94461	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: PBW	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820639						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.017	0.20									
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Sample ID LCS-R94461	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: LCSW	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820640						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.958	0.20	5.000	0	99.2	90	110				
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Sample ID N013107-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820642						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.991	0.20						1.006	1.51	20	
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Sample ID N013107-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.966	0.20	1.000	1.006	95.9	90	110				
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Sample ID N013107-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.082	0.20	1.000	1.040	104	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013107-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.050	0.20	1.000	1.040	101	90	110	2.082	1.53	20	

Sample ID N013107-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.053	0.20	1.000	0.9889	106	90	110				

Sample ID N013107-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820652						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.261	0.20	1.000	0.2199	104	90	110				

Sample ID N013107-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820654						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.066	0.20	1.000	0	107	90	110				

Sample ID N013107-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820655						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.460	0.20	1.000	1.474	98.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820657						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.242	0.20	5.000	7.199	101	90	110				

Sample ID N013108-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820659						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.609	0.20	5.000	3.577	101	90	110				

Sample ID N013108-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820663						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.374	0.20	5.000	3.631	94.9	90	110				

Sample ID N013108-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.087	0.20	5.000	4.016	101	90	110				

Sample ID N013108-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820667						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.004	0.20	1.000	0	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-007A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820675						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				

Sample ID N013108-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820676						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.042	0.20	1.000	0	104	90	110				

Sample ID N013108-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.008	0.20	5.000	4.909	102	90	110				

Sample ID N013108-012A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.471	0.20	5.000	4.560	98.2	90	110				

Sample ID N013108-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820684						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.271	0.20	1.000	4.222	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820686						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.988	0.20	1.000	0.9091	108	90	110				
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Sample ID N013108-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820687						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.488	0.20	1.000	1.566	92.2	90	110				
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Sample ID N013108-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94461						
Client ID: ZZZZZZ	Batch ID: R94461	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820688						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.198	0.20	5.000	4.222	99.5	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-017A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820759						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.560	0.20	1.000	2.533	103	90	110	3.565	0.152	20	

Sample ID N013108-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820761						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.917	0.20	1.000	0	91.7	90	110				

Sample ID N013108-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820765						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	18.614	0.20	5.000	13.47	103	90	110				

Sample ID N013108-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820767						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.780	0.20	5.000	2.874	98.1	90	110				

Sample ID N013108-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820769						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820771						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0	102	90	110				

Sample ID N013108-024A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820773						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID N013108-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820776						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.238	0.20	1.000	1.175	106	90	110				

Sample ID N013108-028A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820778						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.225	0.20	1.000	0.2041	102	90	110				

Sample ID N013108-030A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820780						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.627	0.20	1.000	0.6257	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013108-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820781						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.359	0.20	1.000	1.294	107	90	110				

Sample ID N013108-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820783						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.997	0.20	1.000	0	99.6	90	110				

Sample ID N013108-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820787						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110				

Sample ID N013108-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94462						
Client ID: ZZZZZZ	Batch ID: R94462	TestNo: EPA 218.6		Analysis Date: 8/5/2014	SeqNo: 1820794						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.032	0.20	1.000	2.935	110	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-026A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.402	0.20	5.000	4.472	98.6	90	110	9.390	0.132	20	

Sample ID N013132-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822462						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N013138-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822478						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.720	0.20	5.000	1.631	102	90	110				

Sample ID N013138-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822480						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.530	0.20	5.000	1.634	97.9	90	110				

Sample ID N013108-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46253	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: PBW	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820482						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46253	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: LCSW	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.078	1.0	10.00	0	101	85	115				
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Sample ID N013108-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820512						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	17.011	1.0	10.00	7.415	96.0	75	125				
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Sample ID N013108-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820513						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	17.034	1.0	10.00	7.415	96.2	75	125	17.01	0.131	20	
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Sample ID N013108-013B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820514						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	14.314	1.0	10.00	4.805	95.1	75	125				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46254	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: PBW	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820092						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46254	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: LCSW	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820093						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.300	1.0	10.00	0	103	85	115				
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Sample ID N013107-003B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820481						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	11.174	1.0	10.00	1.027	101	75	125				
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Sample ID N013108-025B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	365.457	5.0	10.00	345.0	205	75	125				S
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Sample ID N013108-025B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820522						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	367.127	5.0	10.00	345.0	221	75	125	365.5	0.456	20	S
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-601-059-Q3
Lab Order: N013108 **Collection Date:** 8/4/2014 12:17:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013108-001

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140805B** QC Batch: **R94429** PrepDate Analyst: **PS**
Nitrate as N 3.8 0.026 0.25 mg/L 5 8/5/2014 10:50 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	CA-MW-602-059-Q3
Lab Order:	N013108	Collection Date:	8/4/2014 12:54:00 PM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N013108-002		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805B	QC Batch: R94429			PrepDate			Analyst: PS
Nitrate as N	2.7	0.010	0.10	mg/L	2		8/5/2014 11:03 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-003

Client Sample ID: MW-907-059-Q3
Collection Date: 8/4/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140805B** QC Batch: **R94429** PrepDate Analyst: **PS**
Nitrate as N 2.7 0.026 0.25 mg/L 5 8/5/2014 11:15 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-004

Client Sample ID: CA-MW-603-059-Q3
Collection Date: 8/4/2014 1:44:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140805B** QC Batch: **R94429** PrepDate: Analyst: **PS**
Nitrate as N 16 0.10 1.0 mg/L 20 8/5/2014 11:28 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-007

Client Sample ID: SA-MW-29D-059-Q3
Collection Date: 8/4/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Sulfate	24	0.16	2.5		mg/L	5	8/11/2014 10:53 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805B	QC Batch: R94429				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 09:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-008

Client Sample ID: SA-MW-29S-059-Q3
Collection Date: 8/4/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Sulfate	92	0.33	5.0		mg/L	10	8/11/2014 11:06 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140806A	QC Batch: R94446				PrepDate		Analyst: PS
Nitrate as N	5.9	0.026	0.25		mg/L	5	8/6/2014 09:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-009

Client Sample ID: SA-MW-30D-059-Q3
Collection Date: 8/4/2014 1:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Sulfate	120	0.33	5.0		mg/L	10	8/11/2014 11:18 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140806A	QC Batch: R94446				PrepDate		Analyst: PS
Nitrate as N	3.3	0.010	0.10		mg/L	2	8/6/2014 09:57 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-010

Client Sample ID: SA-MW-30S-059-Q3
Collection Date: 8/4/2014 1:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Sulfate	81	0.33	5.0		mg/L	10	8/11/2014 11:31 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805B	QC Batch: R94429				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 09:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-011

Client Sample ID: CA-MW-317D-059-Q3
Collection Date: 8/4/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	120	0.50	10		mg/L	20	8/11/2014 11:44 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/5/2014 10:25 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	12	0.051	0.50		mg/L	10	8/5/2014 03:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-012

Client Sample ID: CA-MW-317S-059-Q3
Collection Date: 8/4/2014 3:45:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	81	0.50	10		mg/L	20	8/11/2014 11:56 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 10:37 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	10	0.051	0.50		mg/L	10	8/5/2014 03:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-013

Client Sample ID: MW-903-059-Q3
Collection Date: 8/4/2014 3:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	81	0.50	10		mg/L	20	8/11/2014 12:34 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 10:50 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	10	0.051	0.50		mg/L	10	8/5/2014 03:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-014

Client Sample ID: CA-MW-401-059-Q3
Collection Date: 8/4/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	69	0.50	10		mg/L	20	8/11/2014 04:29 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 11:03 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.26	0.0051	0.050		mg/L	1	8/5/2014 11:03 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 1:02:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	36	0.12	2.5		mg/L	5	8/11/2014 12:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 11:15 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 11:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	130	1.2	25		mg/L	50	8/11/2014 01:17 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 11:28 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	5.8	0.051	0.50		mg/L	10	8/5/2014 04:06 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-017

Client Sample ID: CA-MW-403S-059-Q3
Collection Date: 8/4/2014 11:09:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 01:30 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 11:41 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.20	0.0051	0.050		mg/L	1	8/5/2014 11:41 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:07:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428			PrepDate			Analyst: PS
Nitrate as N	2.9	0.010	0.10	mg/L	2		8/5/2014 04:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428			PrepDate			Analyst: PS
Nitrate as N	1.5	0.0051	0.050	mg/L	1		8/5/2014 12:31 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-021

Client Sample ID: MW-906-059-Q3
Collection Date: 8/4/2014 4:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140806A** QC Batch: **R94446** PrepDate: Analyst: **PS**
Nitrate as N 1.4 0.0051 0.050 mg/L 1 8/6/2014 10:09 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-023

Client Sample ID: SC-MW-11D-059-Q3
Collection Date: 8/4/2014 11:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	22	0.12	2.5		mg/L	5	8/11/2014 01:42 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 12:44 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 12:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-024

Client Sample ID: SC-MW-12D-059-Q3
Collection Date: 8/4/2014 12:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	23	0.12	2.5		mg/L	5	8/11/2014 01:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 12:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 12:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-025

Client Sample ID: SC-MW-12S-059-Q3
Collection Date: 8/4/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 02:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 01:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	7.8	0.051	0.50		mg/L	10	8/5/2014 04:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-026

Client Sample ID: SC-MW-13D-059-Q3
Collection Date: 8/4/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	41	0.12	2.5		mg/L	5	8/11/2014 02:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 01:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.20	0.0051	0.050		mg/L	1	8/5/2014 01:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-027

Client Sample ID: SC-MW-13S-059-Q3
Collection Date: 8/4/2014 2:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	17	0.12	2.5		mg/L	5	8/11/2014 02:33 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/5/2014 01:34 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	16	0.10	1.0		mg/L	20	8/5/2014 04:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-028

Client Sample ID: CA-MW-303S-059-Q3
Collection Date: 8/4/2014 11:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 03:26 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 01:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.058	0.0051	0.050		mg/L	1	8/5/2014 01:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-029

Client Sample ID: CA-MW-304-059-Q3
Collection Date: 8/4/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811A	QC Batch: R94501				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 03:38 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 02:00 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	3.0	0.026	0.25		mg/L	5	8/5/2014 04:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-030

Client Sample ID: CA-MW-305-059-Q3
Collection Date: 8/4/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811B	QC Batch: R94517				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 07:38 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 02:12 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.41	0.0051	0.050		mg/L	1	8/5/2014 02:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-031

Client Sample ID: CA-MW-306D-059-Q3
Collection Date: 8/4/2014 2:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811B	QC Batch: R94517				PrepDate		Analyst: PS
Chloride	110	1.2	25		mg/L	50	8/11/2014 07:51 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 02:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	4.1	0.026	0.25		mg/L	5	8/5/2014 05:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-032

Client Sample ID: CA-MW-306S-059-Q3
Collection Date: 8/4/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811B	QC Batch: R94517				PrepDate		Analyst: PS
Chloride	110	1.2	25		mg/L	50	8/11/2014 08:29 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 03:03 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	0.13	0.0051	0.050		mg/L	1	8/5/2014 03:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-033

Client Sample ID: CA-MW-307S-059-Q3
Collection Date: 8/4/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140811B	QC Batch: R94517				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/11/2014 08:42 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/5/2014 03:15 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140805A	QC Batch: R94428				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/5/2014 03:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94501_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94501			
Client ID:	PBW	Batch ID:	R94501	TestNo:	EPA 300.0			Analysis Date:	8/11/2014	SeqNo:	1822816			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		ND		0.50										
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Sample ID	LCS-R94501_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94501			
Client ID:	LCSW	Batch ID:	R94501	TestNo:	EPA 300.0			Analysis Date:	8/11/2014	SeqNo:	1822817			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		2.432		0.50	2.500	0		97.3	90	110				
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Sample ID	N013108-023C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94501			
Client ID:	ZZZZZ	Batch ID:	R94501	TestNo:	EPA 300.0			Analysis Date:	8/11/2014	SeqNo:	1822836			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		19.550		2.5						22.32		13.2	20	
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Sample ID	N013108-012C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94501			
Client ID:	ZZZZZ	Batch ID:	R94501	TestNo:	EPA 300.0			Analysis Date:	8/11/2014	SeqNo:	1822837			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		81.060		10						80.58		0.594	20	
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Sample ID	N013108-023C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94501			
Client ID:	ZZZZZ	Batch ID:	R94501	TestNo:	EPA 300.0			Analysis Date:	8/11/2014	SeqNo:	1822840			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		35.210		2.5	12.50	22.32		103	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013108-012C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: ZZZZZZ	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822841						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	132.100	10	50.00	80.58	103	80	120				

Sample ID N013108-012C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: ZZZZZZ	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	133.480	10	50.00	80.58	106	80	120	132.1	1.04	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID MB-R94517_CL	SampType: MBLK	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: PBW	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1823182						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.50

Sample ID LCS-R94517_CL	SampType: LCS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: LCSW	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1823183						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2.415 0.50 2.500 0 96.6 90 110

Sample ID N013129-018C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: ZZZZZZ	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823208						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 49.140 10 49.56 0.851 20

Sample ID N013129-018C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: ZZZZZZ	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823209						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 98.020 10 50.00 49.56 96.9 80 120

Sample ID N013129-017C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: ZZZZZZ	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823212						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 72.100 10 73.56 2.00 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013129-017C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: ZZZZZZ	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823213						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	123.760	10	50.00	73.56	100	80	120				

Sample ID N013129-017C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94517						
Client ID: ZZZZZZ	Batch ID: R94517	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823214						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	124.700	10	50.00	73.56	102	80	120	123.8	0.757	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94428_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: PBW	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819822						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94428_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: LCSW	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819823						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.358 0.10 2.500 0 94.3 90 110

Sample ID N013108-011C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819846						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.20 0 0 20

Sample ID N013108-015C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819847						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N013108-015C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819849						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.998 0.10 2.500 0 120 80 120

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID N013108-015C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Orthophosphate, Dissolved (as P)	3.171	0.10	2.500	0	127	80	120	2.998	5.61	20	S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94501_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: PBW	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822849						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	ND	0.50									
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Sample ID LCS-R94501_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: LCSW	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	4.871	0.50	5.000	0	97.4	90	110				
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Sample ID N013108-007C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: ZZZZZ	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	24.285	2.5						23.77	2.14	20	
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Sample ID N013108-007C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: ZZZZZ	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	48.740	2.5	25.00	23.77	99.9	80	120				
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Sample ID N013108-007C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94501						
Client ID: ZZZZZ	Batch ID: R94501	TestNo: EPA 300.0		Analysis Date: 8/11/2014	SeqNo: 1822861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	48.650	2.5	25.00	23.77	99.5	80	120	48.74	0.185	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013108-012C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819786						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	19.420	0.50	10.00	9.980	94.4	80	120	19.32	0.516	20	

Sample ID N013108-013C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94428						
Client ID: ZZZZZZ	Batch ID: R94428	TestNo: EPA 300.0		Analysis Date: 8/5/2014	SeqNo: 1819787						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	19.410	0.50	10.00	9.950	94.6	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013108-001C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94429						
Client ID: ZZZZZZ	Batch ID: R94429	TestNo: EPA 300.0		Analysis Date: 8/6/2014	SeqNo: 1819737						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.355	0.25	5.000	3.830	90.5	80	120				

Sample ID N013108-001C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94429						
Client ID: ZZZZZZ	Batch ID: R94429	TestNo: EPA 300.0		Analysis Date: 8/6/2014	SeqNo: 1819738						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.655	0.25	5.000	3.830	96.5	80	120	8.355	3.53	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-001

Client Sample ID: CA-MW-601-059-Q3
Collection Date: 8/4/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 05:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-002

Client Sample ID: CA-MW-602-059-Q3
Collection Date: 8/4/2014 12:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	8/6/2014 05:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-003

Client Sample ID: MW-907-059-Q3
Collection Date: 8/4/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 05:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-004

Client Sample ID: CA-MW-603-059-Q3
Collection Date: 8/4/2014 1:44:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 06:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-007

Client Sample ID: SA-MW-29D-059-Q3
Collection Date: 8/4/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 06:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-008

Client Sample ID: SA-MW-29S-059-Q3
Collection Date: 8/4/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 07:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-009

Client Sample ID: SA-MW-30D-059-Q3
Collection Date: 8/4/2014 1:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-010

Client Sample ID: SA-MW-30S-059-Q3
Collection Date: 8/4/2014 1:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 08:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-317D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:30:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 09:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-317S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 09:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-013

Client Sample ID: MW-903-059-Q3
Collection Date: 8/4/2014 3:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 09:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-014

Client Sample ID: CA-MW-401-059-Q3
Collection Date: 8/4/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 10:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 1:02:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 10:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/6/2014 11:42 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-403S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:09:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/7/2014 12:05 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:07:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/7/2014 12:28 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-020

Client Sample ID: CA-MW-506S-059-Q3
Collection Date: 8/4/2014 3:53:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	8/7/2014 12:51 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-021

Client Sample ID: MW-906-059-Q3
Collection Date: 8/4/2014 4:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/7/2014 01:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-023

Client Sample ID: SC-MW-11D-059-Q3
Collection Date: 8/4/2014 11:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	8/7/2014 01:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-024

Client Sample ID: SC-MW-12D-059-Q3
Collection Date: 8/4/2014 12:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140806A	QC Batch: R94458			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/7/2014 02:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-025

Client Sample ID: SC-MW-12S-059-Q3
Collection Date: 8/4/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 12:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-026

Client Sample ID: SC-MW-13D-059-Q3
Collection Date: 8/4/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 12:42 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-027

Client Sample ID: SC-MW-13S-059-Q3
Collection Date: 8/4/2014 2:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 01:05 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-028	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 01:28 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-029

Client Sample ID: CA-MW-304-059-Q3
Collection Date: 8/4/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 01:51 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-030

Client Sample ID: CA-MW-305-059-Q3
Collection Date: 8/4/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 03:23 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 03:45 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 03:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-033

Client Sample ID: CA-MW-307S-059-Q3
Collection Date: 8/4/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140807A	QC Batch: R94474			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/8/2014 04:08 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94458	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94458
Client ID: PBW	Batch ID: R94458	TestNo: SM 5310C		Analysis Date: 8/6/2014	SeqNo: 1820430
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Organic Carbon, Total	ND	1.0			

Sample ID LCS-R94458	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94458
Client ID: LCSW	Batch ID: R94458	TestNo: SM 5310C		Analysis Date: 8/6/2014	SeqNo: 1820431
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Organic Carbon, Total	10.575	1.0	10.00	0	106 85 115

Sample ID N013108-001D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94458
Client ID: ZZZZZ	Batch ID: R94458	TestNo: SM 5310C		Analysis Date: 8/6/2014	SeqNo: 1820432
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Organic Carbon, Total	9.692	1.0	10.00	0.6813	90.1 75 125

Sample ID N013108-001D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94458
Client ID: ZZZZZ	Batch ID: R94458	TestNo: SM 5310C		Analysis Date: 8/6/2014	SeqNo: 1820433
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Organic Carbon, Total	9.549	1.0	10.00	0.6813	88.7 75 125 9.692 1.49 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94474	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94474						
Client ID: PBW	Batch ID: R94474	TestNo: SM 5310C		Analysis Date: 8/7/2014	SeqNo: 1821536						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94474	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94474						
Client ID: LCSW	Batch ID: R94474	TestNo: SM 5310C		Analysis Date: 8/7/2014	SeqNo: 1821537						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.712 1.0 10.00 0 107 85 115

Sample ID N013129-012D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94474						
Client ID: ZZZZZ	Batch ID: R94474	TestNo: SM 5310C		Analysis Date: 8/7/2014	SeqNo: 1821538						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.131 1.0 10.00 0.4946 96.4 75 125

Sample ID N013129-012D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94474						
Client ID: ZZZZZ	Batch ID: R94474	TestNo: SM 5310C		Analysis Date: 8/7/2014	SeqNo: 1821539						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.160 1.0 10.00 0.4946 96.7 75 125 10.13 0.293 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-001

Client Sample ID: CA-MW-601-059-Q3
Collection Date: 8/4/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 12:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-002

Client Sample ID: CA-MW-602-059-Q3
Collection Date: 8/4/2014 12:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 11:15 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-004

Client Sample ID: CA-MW-603-059-Q3
Collection Date: 8/4/2014 1:44:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 12:54 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-007

Client Sample ID: SA-MW-29D-059-Q3
Collection Date: 8/4/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	0.55	0.0013	0.020	mg/L	1	8/7/2014 01:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-008

Client Sample ID: SA-MW-29S-059-Q3
Collection Date: 8/4/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 01:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-009

Client Sample ID: SA-MW-30D-059-Q3
Collection Date: 8/4/2014 1:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 01:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-317D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:30:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 01:29 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-317S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 01:34 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-013

Client Sample ID: MW-903-059-Q3
Collection Date: 8/4/2014 3:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 01:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-014

Client Sample ID: CA-MW-401-059-Q3
Collection Date: 8/4/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	0.022	0.0013	0.020	mg/L	1	8/7/2014 01:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 1:02:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 01:59 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate	8/6/2014	Analyst: CEI
Iron	0.029 0.0013	0.020	mg/L	1 8/7/2014 02:13 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-403S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:09:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate: 8/6/2014	Analyst: CEI
Iron	0.026 0.0013	0.020	mg/L 1 8/7/2014 02:18 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:07:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 02:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 02:29 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-021

Client Sample ID: MW-906-059-Q3
Collection Date: 8/4/2014 4:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 02:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-11D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:15:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-023	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256	PrepDate	8/6/2014	Analyst: CEI
Iron	0.17 0.0013	0.020	mg/L	1 8/7/2014 02:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-024

Client Sample ID: SC-MW-12D-059-Q3
Collection Date: 8/4/2014 12:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46256			PrepDate	8/6/2014	Analyst: CEI
Iron	0.17	0.0013	0.020	mg/L	1	8/7/2014 02:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-12S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:47:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-025	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 03:45 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-13D-059-Q3
Lab Order: N013108 **Collection Date:** 8/4/2014 1:35:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013108-026

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140807A** QC Batch: **46257** PrepDate: **8/6/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/7/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-027

Client Sample ID: SC-MW-13S-059-Q3
Collection Date: 8/4/2014 2:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257			PrepDate	8/6/2014	Analyst: CEI
Iron	0.038	0.0013	0.020	mg/L	1	8/7/2014 03:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-028	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 03:56 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-304-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:05:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-029	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 04:00 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-030

Client Sample ID: CA-MW-305-059-Q3
Collection Date: 8/4/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257			PrepDate	8/6/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/7/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257	PrepDate	8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/7/2014 04:10 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140807A	QC Batch: 46257	PrepDate: 8/6/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			8/7/2014 04:23 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-307S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:29:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-033	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

	EPA 3010A			EPA 6010B			
RunID: ICP2_140807A	QC Batch: 46257			PrepDate	8/6/2014	Analyst: CEI	
Iron	0.37	0.0013	0.020	mg/L	1	8/7/2014 04:28 PM	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46256	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469
Client ID: PBW	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821280
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.005	0.020			
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Sample ID LCS-46256	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469
Client ID: LCSW	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821281
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.106	0.020	0.1000	0	106 85 115
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Sample ID N013108-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469
Client ID: ZZZZZ	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821285
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.135	0.020	0.1000	0.01236	123 75 125
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Sample ID N013108-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469
Client ID: ZZZZZ	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821286
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.106	0.020	0.1000	0.01236	94.1 75 125 0.1349 23.6 20 R
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Sample ID N013108-013B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94469
Client ID: ZZZZZ	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821299
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron	0.096	0.020	0.1000	0.006489	89.6 75 125
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: MB-46257	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469						
Client ID: PBW	Batch ID: 46257	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821311						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 0.020

Sample ID: LCS-46257	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469						
Client ID: LCSW	Batch ID: 46257	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821312						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.104 0.020 0.1000 0 104 85 115

Sample ID: N013108-026B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469						
Client ID: ZZZZZ	Batch ID: 46257	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821321						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.111 0.020 0.1000 0.006193 105 75 125

Sample ID: N013108-026B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/6/2014	RunNo: 94469						
Client ID: ZZZZZ	Batch ID: 46257	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/7/2014	SeqNo: 1821322						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.102 0.020 0.1000 0.006193 95.7 75 125 0.1107 8.27 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-001

Client Sample ID: CA-MW-601-059-Q3
Collection Date: 8/4/2014 12:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.48	0.027	0.10	µg/L	1	8/6/2014 02:56 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 02:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-002

Client Sample ID: CA-MW-602-059-Q3
Collection Date: 8/4/2014 12:54:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.48	0.027	0.10	µg/L	1	8/6/2014 03:10 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 03:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-003

Client Sample ID: MW-907-059-Q3
Collection Date: 8/4/2014 1:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.48	0.027	0.10	µg/L	1	8/6/2014 03:16 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 03:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-004

Client Sample ID: CA-MW-603-059-Q3
Collection Date: 8/4/2014 1:44:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253		PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.62	0.027	0.10	µg/L	1 8/6/2014 03:23 PM
Manganese	ND	0.026	0.50	µg/L	1 8/6/2014 03:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-007

Client Sample ID: SA-MW-29D-059-Q3
Collection Date: 8/4/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140807A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	4.1	0.027	0.10	µg/L	1	8/7/2014 12:28 PM
Manganese	2000	0.64	12	µg/L	25	8/7/2014 12:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-008

Client Sample ID: SA-MW-29S-059-Q3
Collection Date: 8/4/2014 3:36:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.50	0.027	0.10	µg/L	1	8/6/2014 03:34 PM
Manganese	92	0.026	0.50	µg/L	1	8/6/2014 03:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-009

Client Sample ID: SA-MW-30D-059-Q3
Collection Date: 8/4/2014 1:07:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	1.8	0.027	0.10	µg/L	1	8/6/2014 03:40 PM
Manganese	11	0.026	0.50	µg/L	1	8/6/2014 03:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-010

Client Sample ID: SA-MW-30S-059-Q3
Collection Date: 8/4/2014 1:39:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140807A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	11	0.027	0.10	µg/L	1	8/7/2014 12:33 PM
Manganese	1300	0.26	5.0	µg/L	10	8/7/2014 12:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-011

Client Sample ID: CA-MW-317D-059-Q3
Collection Date: 8/4/2014 3:30:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	1.1	0.027	0.10	µg/L	1	8/6/2014 03:51 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 03:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-317S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:45:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-012	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	1.8	0.027	0.10	µg/L	1	8/6/2014 04:08 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 04:08 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-013

Client Sample ID: MW-903-059-Q3
Collection Date: 8/4/2014 3:55:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	1.8	0.027	0.10	µg/L	1	8/6/2014 04:13 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 04:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-014

Client Sample ID: CA-MW-401-059-Q3
Collection Date: 8/4/2014 1:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	2.7	0.027	0.10	µg/L	1	8/6/2014 04:19 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 04:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 1:02:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-015	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI	
Arsenic	4.2	0.027	0.10		µg/L	1	8/6/2014 04:24 PM
Manganese	17	0.026	0.50		µg/L	1	8/6/2014 04:24 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-402S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 12:11:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-016	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI	
Arsenic	0.71	0.027	0.10		µg/L	1	8/6/2014 04:30 PM
Manganese	ND	0.026	0.50		µg/L	1	8/6/2014 04:30 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-403S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:09:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-017	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014		Analyst: CEI
Arsenic	0.44	0.027	0.10		µg/L	1	8/6/2014 04:36 PM
Manganese	ND	0.026	0.50		µg/L	1	8/6/2014 04:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:07:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-019	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014		Analyst: CEI
Arsenic	0.61	0.027	0.10		µg/L	1	8/6/2014 04:41 PM
Manganese	ND	0.026	0.50		µg/L	1	8/6/2014 04:41 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-506S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 3:53:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI	
Arsenic	0.55	0.027	0.10		µg/L	1	8/6/2014 04:47 PM
Manganese	4900	1.3	25		µg/L	50	8/7/2014 12:55 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-021

Client Sample ID: MW-906-059-Q3
Collection Date: 8/4/2014 4:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.50	0.027	0.10	µg/L	1	8/6/2014 04:52 PM
Manganese	4700	1.3	25	µg/L	50	8/7/2014 01:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-023

Client Sample ID: SC-MW-11D-059-Q3
Collection Date: 8/4/2014 11:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10	µg/L	1	8/6/2014 04:57 PM
Manganese	110	0.026	0.50	µg/L	1	8/6/2014 04:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-024

Client Sample ID: SC-MW-12D-059-Q3
Collection Date: 8/4/2014 12:13:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46253			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.40	0.027	0.10	µg/L	1	8/6/2014 05:14 PM
Manganese	150	0.026	0.50	µg/L	1	8/6/2014 05:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-025

Client Sample ID: SC-MW-12S-059-Q3
Collection Date: 8/4/2014 12:47:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	3.7	0.027	0.10	µg/L	1	8/6/2014 12:50 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 12:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-026

Client Sample ID: SC-MW-13D-059-Q3
Collection Date: 8/4/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254	PrepDate	8/6/2014	Analyst: CEI
Arsenic	8.0 0.027	0.10	µg/L	1 8/6/2014 01:46 PM
Manganese	ND 0.026	0.50	µg/L	1 8/6/2014 01:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-027

Client Sample ID: SC-MW-13S-059-Q3
Collection Date: 8/4/2014 2:16:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	3.7	0.027	0.10	µg/L	1	8/6/2014 01:51 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 01:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-303S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 11:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-028	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020		
RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.61	0.027	0.10		µg/L	1 8/6/2014 01:56 PM
Manganese	290	0.13	2.5		µg/L	5 8/6/2014 06:33 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-029

Client Sample ID: CA-MW-304-059-Q3
Collection Date: 8/4/2014 12:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	0.69	0.027	0.10	µg/L	1	8/6/2014 02:02 PM
Manganese	ND	0.026	0.50	µg/L	1	8/6/2014 02:02 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-030

Client Sample ID: CA-MW-305-059-Q3
Collection Date: 8/4/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	2.1	0.027	0.10	µg/L	1	8/6/2014 02:07 PM
Manganese	1600	0.64	12	µg/L	25	8/6/2014 06:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306D-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:39:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-031	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A		EPA 6020			
RunID: ICP7_140806A	QC Batch: 46254		PrepDate	8/6/2014	Analyst: CEI	
Arsenic	0.92	0.027	0.10	µg/L	1	8/6/2014 02:13 PM
Manganese	23	0.026	0.50	µg/L	1	8/6/2014 02:13 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-306S-059-Q3
Lab Order: N013108	Collection Date: 8/4/2014 2:01:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013108-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI	
Arsenic	0.50	0.027	0.10		µg/L	1	8/6/2014 02:19 PM
Manganese	6.8	0.026	0.50		µg/L	1	8/6/2014 02:19 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 18-Aug-14

CLIENT: CH2M HILL
Lab Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013108-033

Client Sample ID: CA-MW-307S-059-Q3
Collection Date: 8/4/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140806A	QC Batch: 46254			PrepDate	8/6/2014	Analyst: CEI
Arsenic	5.2	0.027	0.10	µg/L	1	8/6/2014 02:24 PM
Manganese	670	0.26	5.0	µg/L	10	8/6/2014 06:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46253	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443
Client ID: PBW	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820584
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46253	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443
Client ID: LCSW	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820587
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.359	0.10	10.00	0	104 85 115
Manganese	108.487	0.50	100.0	0	108 85 115

Sample ID N013108-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820614
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	11.526	0.10	10.00	0.4812	110 75 125
Manganese	99.058	0.50	100.0	0	99.1 75 125

Sample ID N013108-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820615
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	11.245	0.10	10.00	0.4812	108 75 125 11.53 2.47 20
Manganese	99.299	0.50	100.0	0	99.3 75 125 99.06 0.243 20

Sample ID N013108-013B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94443
Client ID: ZZZZZ	Batch ID: 46253	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820616
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013108-013B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46253	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.823	0.10	10.00	1.813	110	75	125				
Manganese	99.870	0.50	100.0	0	99.9	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46254	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: PBW	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820551						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	0.037	0.50									

Sample ID LCS-46254	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: LCSW	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820552						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.630	0.10	10.00	0	106	85	115				
Manganese	108.384	0.50	100.0	0	108	85	115				

Sample ID N013108-025B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.797	0.10	10.00	3.744	111	75	125				
Manganese	101.868	0.50	100.0	0	102	75	125				

Sample ID N013108-025B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/6/2014	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820569						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.635	0.10	10.00	3.744	109	75	125	14.80	1.10	20	
Manganese	99.228	0.50	100.0	0	99.2	75	125	101.9	2.63	20	

Sample ID N013107-003B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZ	Batch ID: 46254	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/6/2014	SeqNo: 1820583						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.303	0.10	10.00	1.364	109	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	N013107-003B-MS	SampType:	MS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	RunNo:	94443			
Client ID:	ZZZZZZ	Batch ID:	46254	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	8/6/2014	SeqNo:	1820583		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese		103.945		0.50	100.0	0	104	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name	PGE Hinkley	Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
Location	Hinkley	Preservatives:	(NH4)2, SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, 4°C		
Project Number	492581.UR.IR.FW	Filtered:	Field	Field	Field	Field	Field	Field	Field	NA		
Project Manager	Jennifer Low	Holding Time (days):	28	180	180	2	2	2	2	28		
Sample Manager	Jim Hanvey		Cr(VI) (E218.6) FF	Metals Dissolved (6010BDi)s FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Anions (E300.0) FF, Cl, NO3N	Anions (E300.0) FF, NO3N	Anions (E300.0) FF, NO3N, SO4	Ortho-Phosphate (E300.0) FF	TOC (E5310)		
Cell Number	(404) 229-2181											
Fax Number	(510) 622-9136											
Task Order	59											
Project	2014-COMPLIANCE-IRZ-059-Q3											
Turnaround Time	10 Days											
Shipping Date:												
COC Number:												

SAMPLE ID	DATE	TIME	Matrix	X	X	X	X	X	X	X				
CA-MW-601-059-Q3	8/4/2014	1217	Water	X	X	X		X			X	NO13108-1	6	JD
CA-MW-602-059-Q3	8/4/2014	1254	Water	X	X	X		X			X	-2	6	JD
MW-907-059-Q3	8/4/2014	1304	Water	X	X	X		X			X	-3	6	JD
CA-MW-603-059-Q3	8/4/2014	1344	Water	X	X	X		X			X	-4	6	JD
MW-701-059-Q3	8/4/2014	1629	Water	X								-5	1	JD
MW-702-059-Q3	8/4/2014	1700	Water	X								-6	1	LB
SA-MW-29D-059-Q3	8/4/2014	1504	Water	X	X	X			X		X	-7	6	LB
SA-MW-29S-059-Q3	8/4/2014	1536	Water	X	X	X			X		X	-8	6	LB
SA-MW-30D-059-Q3	8/4/2014	1307	Water	X	X	X			X		X	-9	6	LB
SA-MW-30S-059-Q3	8/4/2014	1339	Water	X	X	X			X		X	-10	6	LB
CA-MW-317D-059-Q3	8/4/2014	1530	Water	X	X	X	X			X	X	-11	6	JD
CA-MW-317S-059-Q3	8/4/2014	1545	Water	X	X	X	X			X	X	-12	6	MD
MW-903-059-Q3	8/4/2014	1555	Water	X	X	X	X			X	X	-13	6	MD
CA-MW-401-059-Q3	8/4/2014	1359	Water	X	X	X	X			X	X	-14	6	MD
CA-MW-402D-059-Q3	8/4/2014	1302	Water	X	X	X	X			X	X	-15	6	MD
CA-MW-402S-059-Q3	8/4/2014	1211	Water	X	X	X	X			X	X	-16	6	MD
CA-MW-403S-059-Q3	8/4/2014	1109	Water	X	X	X	X			X	X	-17	6	MD

Approved by	<i>[Signature]</i>	Signatures	Date/Time	8-4-14/1715	Shipping Details	ATTN:	Special Instructions:
Sampled by	<i>[Signature]</i>	LEE BOGGS	8/4/14	Method of Shipment:	Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001		
Relinquished by	<i>[Signature]</i>		8/4/14 715	On Ice: (yes) / no 3=900/2,900			
Received by	<i>[Signature]</i>		8/4/14 1715	Airbill No:			
Relinquished by	<i>[Signature]</i>		8/4/14 2050	Lab Name: Advanced Technology Laboratories			
Received by	<i>[Signature]</i>		8/4/14 2050	Lab Phone: (702) 307-2659			

Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
Location Hinkley					Preservatives: (NH4)2SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	H2SO4, 4°C		
Project Number 492581.UR.IR.FW				Filtered:	Field	Field	Field	Field	Field	Field	Field	NA		
Project Manager Jennifer Low					Holding Time (days):	28	180	180	2	2	2	2		
Sample Manager Jim Hanvey				Matrix	Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Anions (E300.0) FF Cl, NO3N	Anions (E300.0) FF NO3N	Anions (E300.0) FF NO3N, SO4	Ortho-Phosphate (E300.0) FF	TOC (E5310)		
Cell Number (404) 229-2181														
Fax Number (510) 622-9136														
Task Order 59														
Project 2014-COMPLIANCE-IRZ-059-Q3														
Turnaround Time 10 Days														
Shipping Date:														
COC Number:														
SAMPLE ID	DATE	TIME	Matrix											
MW-703-059-Q3	8/4/2014	1020	Water	X									1	MD
CA-MW-506D-059-Q3	8/4/2014	1507	Water	X	X	X		X			X		6	NT
CA-MW-506S-059-Q3	8/4/2014	1553	Water	X	X	X		X			X		6	NT
MW-906-059-Q3	8/4/2014	1603	Water	X	X	X		X			X		6	NT
MW-704-059-Q3	8/4/2014	1130	Water	X									1	NT
SC-MW-11D-059-Q3	8/4/2014	1115	Water	X	X	X	X			X	X		6	NT
SC-MW-12D-059-Q3	8/4/2014	1213	Water	X	X	X	X			X	X		6	NT
SC-MW-12S-059-Q3	8/4/2014	1247	Water	X	X	X	X			X	X		6	NT
SC-MW-13D-059-Q3	8/4/2014	1335	Water	X	X	X	X			X	X		6	NT
SC-MW-13S-059-Q3	8/4/2014	1416	Water	X	X	X	X			X	X		6	NT
CA-MW-303S-059-Q3	8/4/2014	1111	Water	X	X	X	X			X	X		6	PM
CA-MW-304-059-Q3	8/4/2014	1205	Water	X	X	X	X			X	X		6	PM
CA-MW-305-059-Q3	8/4/2014	1251	Water	X	X	X	X			X	X		6	PM
CA-MW-306D-059-Q3	8/4/2014	1439	Water	X	X	X	X			X	X		6	PM
CA-MW-306S-059-Q3	8/4/2014	1401	Water	X	X	X	X			X	X		6	PM
CA-MW-307S-059-Q3	8/4/2014	1529	Water	X	X	X	X			X	X		6	PM
MW-705-059-Q3	8/4/2014	1305	Water	X									1	PM

NO13108-18

-19
-20
-21
-22
-23
-24
-25
-26
-27
-28
-29
-30
-31
-32
-33
-34

Signatures Approved by <i>Jim Hanvey</i> Sampled by <i>Lee Bures</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>		Date/Time 8.4.14 / 1715 8/4/14 8/4/14 1715 8/4/14 1715 8/4/14 2030		Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3-3°C / 3-6°C / 3-12°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659		ATTN: Special Instructions: Tot. # Containers = 180 Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 8/4/2014 Workorder: N013108
 Rep sample Temp (Deg C): 3.9/2.9/3.3/3.6/3.1 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC  8/5/2014

Reviewed By:  08/08/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013108-034A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.01468 * 1 \\ &= 0.01468\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

 8/18/2014

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013108-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 7.1993 * 1 \\ &= 7.1993\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 7.2$$

 8/18/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the original sample as follows:

$$\text{Nitrate, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013108-019C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Nitrate, mg/L} &= 1.47 * 2 \\ &= 2.94 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Nitrate, mg/L} = 2.9$$

 8/18/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N013108-012D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [0.7223] [1] - 0.0732$$

$$\text{TOC} = 0.6491$$

Reporting results in two significant figures,

$$\text{TOC} = \mathbf{0.65} \text{ mg/L}$$

$$\text{TOC} = \mathbf{ND}$$

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013108-007B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.5494149937 * 1 * (25/25) \\ &= 0.5494149937 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = 0.55$$

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013108
Test Method: EPA 6010
Analysis Date: 8/7/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46256

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013108-002B-DT 5X	Iron	mg/L	0.00942848	NA	0.012359218	23.71%	10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013108
Test Method: EPA 6010
Analysis Date: 8/7/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46257

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013108-026B-DT 5X	Iron	mg/L	0.02803657	NA	0.00619264	352.74%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013108-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94469						
Client ID: ZZZZZ	Batch ID: 46256	TestNo: EPA 6010B EPA 3010A	Analysis Date: 8/7/2014	SeqNo: 1821284							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	2.778	0.020	2.500	0.01236	111	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013108-026B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94469						
Client ID: ZZZZZ	Batch ID: 46257	TestNo: EPA 6010B EPA 3010A	Analysis Date: 8/7/2014	SeqNo: 1821320							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.866	0.020	2.500	0.006193	114	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013108-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 7.414996325239 * 1 * (25/25) \\ &= 7.414996325239 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 7.4$$

8/18/2014



ASSET Laboratories**ICP-Metals in Water**

Work Order No.: N013108
Test Method: EPA 6020
Analysis Date: 8/6/2014

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr, As & Mn. The calculated values are <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013108-001B-DT 5X	Chromium	µg/L	7.686038275	NA	7.414996325	3.66%	10
N013108-001B-DT 5X	Arsenic	µg/L	0.509751159	NA	0.48122214	5.93%	10
N013108-001B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

Dilution Test Summary

Matrix: Water
Batch No.: 46253

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013108
Test Method: EPA 6020
Analysis Date: 8/6/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46254

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Mn. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013108-025B-DT 25X	Chromium	µg/L	358.692255	PASS	344.9772806	3.98%	10
N013108-025B-DT 5X	Arsenic	µg/L	3.720218892	PASS	3.744387165	0.65%	10
N013108-025B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

CLIENT: CH2M HILL
 Work Order: N013108
 Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013108-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46253	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820516						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	17.328	1.0	10.00	7.415	99.1	80	120				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013108-025B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94443						
Client ID: ZZZZZZ	Batch ID: 46254	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/6/2014	SeqNo: 1820518						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	354.527	5.0	10.00	345.0	95.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013108-001B-PS	SampType: PS	TestCode: 6020WDAsMn Units: µg/L				Prep Date:			RunNo: 94443		
Client ID: ZZZZZZ	Batch ID: 46253	TestNo: EPA 6020		EPA 3010A		Analysis Date: 8/6/2014			SeqNo: 1820618		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.365	0.10	10.00	0.4812	109	80	120				
Manganese	101.459	0.50	100.0	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	

CLIENT: CH2M HILL
Work Order: N013108
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013108-025B-PS	SampType: PS	TestCode: 6020WDAsMn Units: µg/L				Prep Date:			RunNo: 94443		
Client ID: ZZZZZZ	Batch ID: 46254	TestNo: EPA 6020		EPA 3010A		Analysis Date: 8/6/2014			SeqNo: 1820617		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.490	0.10	10.00	3.744	107	80	120				
Manganese	100.578	0.50	100.0	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	

August 20, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013132

RE: PGE Hinkley, 492581.UR.IR.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on August 06, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Gross Alpha/Beta was subcontracted to Pace Analytical- Greensburg,PA.

Analytical Comments for EPA 200.8:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Uranium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Dilution was necessary for Orthophosphate, Dissolved (as P) and/or Nitrate on samples N013132-001, N013132-002, N013132-003, N013132-004, N013132-007, N013132-023 and N013132-024 due to precipitation upon the addition of eluent.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on QC sample N013132-039C-MS and N013132-039C-MSD are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (7.353 ug/L) and hexavalent chromium (1.356 ug/L) for sample N013132-018 (EX-22-059-Q3) are discrepant, sample from both the total dissolved



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132

CASE NARRATIVE

chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 7.248 and 6.035 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.150 ug/L) and hexavalent chromium (0 ug/L) for sample N013132-032 (SA-MW-02D-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.110 and 0.942 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) on QC sample N013132-035B-MS is outside recovery criteria for Manganese since the analyte concentration in the sample is disproportionate to the spike level. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 20-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013132-001A	CA-MW-309-059-Q3	Water	8/6/2014 9:58:00 AM	8/6/2014	8/20/2014
N013132-001B	CA-MW-309-059-Q3	Water	8/6/2014 9:58:00 AM	8/6/2014	8/20/2014
N013132-001C	CA-MW-309-059-Q3	Water	8/6/2014 9:58:00 AM	8/6/2014	8/20/2014
N013132-001D	CA-MW-309-059-Q3	Water	8/6/2014 9:58:00 AM	8/6/2014	8/20/2014
N013132-002A	CA-MW-310D-059-Q3	Water	8/6/2014 10:45:00 AM	8/6/2014	8/20/2014
N013132-002B	CA-MW-310D-059-Q3	Water	8/6/2014 10:45:00 AM	8/6/2014	8/20/2014
N013132-002C	CA-MW-310D-059-Q3	Water	8/6/2014 10:45:00 AM	8/6/2014	8/20/2014
N013132-002D	CA-MW-310D-059-Q3	Water	8/6/2014 10:45:00 AM	8/6/2014	8/20/2014
N013132-003A	CA-MW-310S-059-Q3	Water	8/6/2014 11:16:00 AM	8/6/2014	8/20/2014
N013132-003B	CA-MW-310S-059-Q3	Water	8/6/2014 11:16:00 AM	8/6/2014	8/20/2014
N013132-003C	CA-MW-310S-059-Q3	Water	8/6/2014 11:16:00 AM	8/6/2014	8/20/2014
N013132-003D	CA-MW-310S-059-Q3	Water	8/6/2014 11:16:00 AM	8/6/2014	8/20/2014
N013132-004A	CA-MW-408-059-Q3	Water	8/6/2014 12:03:00 PM	8/6/2014	8/20/2014
N013132-004B	CA-MW-408-059-Q3	Water	8/6/2014 12:03:00 PM	8/6/2014	8/20/2014
N013132-004C	CA-MW-408-059-Q3	Water	8/6/2014 12:03:00 PM	8/6/2014	8/20/2014
N013132-004D	CA-MW-408-059-Q3	Water	8/6/2014 12:03:00 PM	8/6/2014	8/20/2014
N013132-005A	CA-MW-411D-059-Q3	Water	8/6/2014 1:19:00 PM	8/6/2014	8/20/2014
N013132-005B	CA-MW-411D-059-Q3	Water	8/6/2014 1:19:00 PM	8/6/2014	8/20/2014
N013132-005C	CA-MW-411D-059-Q3	Water	8/6/2014 1:19:00 PM	8/6/2014	8/20/2014
N013132-005D	CA-MW-411D-059-Q3	Water	8/6/2014 1:19:00 PM	8/6/2014	8/20/2014
N013132-006A	CA-MW-411S-059-Q3	Water	8/6/2014 2:00:00 PM	8/6/2014	8/20/2014
N013132-006B	CA-MW-411S-059-Q3	Water	8/6/2014 2:00:00 PM	8/6/2014	8/20/2014
N013132-006C	CA-MW-411S-059-Q3	Water	8/6/2014 2:00:00 PM	8/6/2014	8/20/2014
N013132-006D	CA-MW-411S-059-Q3	Water	8/6/2014 2:00:00 PM	8/6/2014	8/20/2014
N013132-007A	CA-MW-412D-059-Q3	Water	8/6/2014 9:08:00 AM	8/6/2014	8/20/2014
N013132-007B	CA-MW-412D-059-Q3	Water	8/6/2014 9:08:00 AM	8/6/2014	8/20/2014
N013132-007C	CA-MW-412D-059-Q3	Water	8/6/2014 9:08:00 AM	8/6/2014	8/20/2014
N013132-007D	CA-MW-412D-059-Q3	Water	8/6/2014 9:08:00 AM	8/6/2014	8/20/2014
N013132-008A	MW-711-059-Q3	Water	8/6/2014 3:40:00 PM	8/6/2014	8/20/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013132-009A	MW-712-059-Q3	Water	8/6/2014 2:15:00 PM	8/6/2014	8/20/2014
N013132-010A	SA-MW-05D-059-Q3	Water	8/6/2014 1:22:00 PM	8/6/2014	8/20/2014
N013132-010B	SA-MW-05D-059-Q3	Water	8/6/2014 1:22:00 PM	8/6/2014	8/20/2014
N013132-010C	SA-MW-05D-059-Q3	Water	8/6/2014 1:22:00 PM	8/6/2014	8/20/2014
N013132-010D	SA-MW-05D-059-Q3	Water	8/6/2014 1:22:00 PM	8/6/2014	8/20/2014
N013132-011A	SA-MW-05S-059-Q3	Water	8/6/2014 12:34:00 PM	8/6/2014	8/20/2014
N013132-011B	SA-MW-05S-059-Q3	Water	8/6/2014 12:34:00 PM	8/6/2014	8/20/2014
N013132-011C	SA-MW-05S-059-Q3	Water	8/6/2014 12:34:00 PM	8/6/2014	8/20/2014
N013132-011D	SA-MW-05S-059-Q3	Water	8/6/2014 12:34:00 PM	8/6/2014	8/20/2014
N013132-012A	SA-MW-06D-059-Q3	Water	8/6/2014 8:51:00 AM	8/6/2014	8/20/2014
N013132-012B	SA-MW-06D-059-Q3	Water	8/6/2014 8:51:00 AM	8/6/2014	8/20/2014
N013132-012C	SA-MW-06D-059-Q3	Water	8/6/2014 8:51:00 AM	8/6/2014	8/20/2014
N013132-012D	SA-MW-06D-059-Q3	Water	8/6/2014 8:51:00 AM	8/6/2014	8/20/2014
N013132-013A	SA-MW-06S-059-Q3	Water	8/6/2014 9:21:00 AM	8/6/2014	8/20/2014
N013132-013B	SA-MW-06S-059-Q3	Water	8/6/2014 9:21:00 AM	8/6/2014	8/20/2014
N013132-013C	SA-MW-06S-059-Q3	Water	8/6/2014 9:21:00 AM	8/6/2014	8/20/2014
N013132-013D	SA-MW-06S-059-Q3	Water	8/6/2014 9:21:00 AM	8/6/2014	8/20/2014
N013132-014A	SA-MW-10D-059-Q3	Water	8/6/2014 10:46:00 AM	8/6/2014	8/20/2014
N013132-014B	SA-MW-10D-059-Q3	Water	8/6/2014 10:46:00 AM	8/6/2014	8/20/2014
N013132-014C	SA-MW-10D-059-Q3	Water	8/6/2014 10:46:00 AM	8/6/2014	8/20/2014
N013132-014D	SA-MW-10D-059-Q3	Water	8/6/2014 10:46:00 AM	8/6/2014	8/20/2014
N013132-015A	SA-MW-10S-059-Q3	Water	8/6/2014 11:31:00 AM	8/6/2014	8/20/2014
N013132-015B	SA-MW-10S-059-Q3	Water	8/6/2014 11:31:00 AM	8/6/2014	8/20/2014
N013132-015C	SA-MW-10S-059-Q3	Water	8/6/2014 11:31:00 AM	8/6/2014	8/20/2014
N013132-015D	SA-MW-10S-059-Q3	Water	8/6/2014 11:31:00 AM	8/6/2014	8/20/2014
N013132-016A	MW-713-059-Q3	Water	8/6/2014 8:30:00 AM	8/6/2014	8/20/2014
N013132-017A	EX-21-059-Q3	Water	8/6/2014 8:29:00 AM	8/6/2014	8/20/2014
N013132-017B	EX-21-059-Q3	Water	8/6/2014 8:29:00 AM	8/6/2014	8/20/2014
N013132-017C	EX-21-059-Q3	Water	8/6/2014 8:29:00 AM	8/6/2014	8/20/2014
N013132-017D	EX-21-059-Q3	Water	8/6/2014 8:29:00 AM	8/6/2014	8/20/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013132-018A	EX-22-059-Q3	Water	8/6/2014 8:57:00 AM	8/6/2014	8/20/2014
N013132-018B	EX-22-059-Q3	Water	8/6/2014 8:57:00 AM	8/6/2014	8/20/2014
N013132-018C	EX-22-059-Q3	Water	8/6/2014 8:57:00 AM	8/6/2014	8/20/2014
N013132-018D	EX-22-059-Q3	Water	8/6/2014 8:57:00 AM	8/6/2014	8/20/2014
N013132-019A	MW-08-059-Q3	Water	8/6/2014 11:30:00 AM	8/6/2014	8/20/2014
N013132-019B	MW-08-059-Q3	Water	8/6/2014 11:30:00 AM	8/6/2014	8/20/2014
N013132-019C	MW-08-059-Q3	Water	8/6/2014 11:30:00 AM	8/6/2014	8/20/2014
N013132-019D	MW-08-059-Q3	Water	8/6/2014 11:30:00 AM	8/6/2014	8/20/2014
N013132-020A	MW-09-059-Q3	Water	8/6/2014 10:11:00 AM	8/6/2014	8/20/2014
N013132-020B	MW-09-059-Q3	Water	8/6/2014 10:11:00 AM	8/6/2014	8/20/2014
N013132-020C	MW-09-059-Q3	Water	8/6/2014 10:11:00 AM	8/6/2014	8/20/2014
N013132-021A	MW-10-059-Q3	Water	8/6/2014 9:29:00 AM	8/6/2014	8/20/2014
N013132-021B	MW-10-059-Q3	Water	8/6/2014 9:29:00 AM	8/6/2014	8/20/2014
N013132-021C	MW-10-059-Q3	Water	8/6/2014 9:29:00 AM	8/6/2014	8/20/2014
N013132-021D	MW-10-059-Q3	Water	8/6/2014 9:29:00 AM	8/6/2014	8/20/2014
N013132-022A	MW-908-059-Q3	Water	8/6/2014 9:39:00 AM	8/6/2014	8/20/2014
N013132-022B	MW-908-059-Q3	Water	8/6/2014 9:39:00 AM	8/6/2014	8/20/2014
N013132-022C	MW-908-059-Q3	Water	8/6/2014 9:39:00 AM	8/6/2014	8/20/2014
N013132-022D	MW-908-059-Q3	Water	8/6/2014 9:39:00 AM	8/6/2014	8/20/2014
N013132-023A	MW-12A-059-Q3	Water	8/6/2014 11:03:00 AM	8/6/2014	8/20/2014
N013132-023B	MW-12A-059-Q3	Water	8/6/2014 11:03:00 AM	8/6/2014	8/20/2014
N013132-023C	MW-12A-059-Q3	Water	8/6/2014 11:03:00 AM	8/6/2014	8/20/2014
N013132-024A	MW-12B-059-Q3	Water	8/6/2014 3:17:00 PM	8/6/2014	8/20/2014
N013132-024B	MW-12B-059-Q3	Water	8/6/2014 3:17:00 PM	8/6/2014	8/20/2014
N013132-024C	MW-12B-059-Q3	Water	8/6/2014 3:17:00 PM	8/6/2014	8/20/2014
N013132-025A	MW-13-059-Q3	Water	8/6/2014 10:39:00 AM	8/6/2014	8/20/2014
N013132-025B	MW-13-059-Q3	Water	8/6/2014 10:39:00 AM	8/6/2014	8/20/2014
N013132-025C	MW-13-059-Q3	Water	8/6/2014 10:39:00 AM	8/6/2014	8/20/2014
N013132-025D	MW-13-059-Q3	Water	8/6/2014 10:39:00 AM	8/6/2014	8/20/2014
N013132-026A	MW-14A-059-Q3	Water	8/6/2014 11:58:00 AM	8/6/2014	8/20/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013132-026B	MW-14A-059-Q3	Water	8/6/2014 11:58:00 AM	8/6/2014	8/20/2014
N013132-026C	MW-14A-059-Q3	Water	8/6/2014 11:58:00 AM	8/6/2014	8/20/2014
N013132-026D	MW-14A-059-Q3	Water	8/6/2014 11:58:00 AM	8/6/2014	8/20/2014
N013132-026E	MW-14A-059-Q3	Water	8/6/2014 11:58:00 AM	8/6/2014	8/20/2014
N013132-027A	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-027B	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-027C	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-027D	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-027E	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-027F	MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	8/6/2014	8/20/2014
N013132-028A	MW-18-059-Q3	Water	8/6/2014 2:01:00 PM	8/6/2014	8/20/2014
N013132-028B	MW-18-059-Q3	Water	8/6/2014 2:01:00 PM	8/6/2014	8/20/2014
N013132-028C	MW-18-059-Q3	Water	8/6/2014 2:01:00 PM	8/6/2014	8/20/2014
N013132-029A	MW-714-059-Q3	Water	8/6/2014 11:09:00 AM	8/6/2014	8/20/2014
N013132-030A	SA-MW-01D-059-Q3	Water	8/6/2014 12:51:00 PM	8/6/2014	8/20/2014
N013132-030B	SA-MW-01D-059-Q3	Water	8/6/2014 12:51:00 PM	8/6/2014	8/20/2014
N013132-030C	SA-MW-01D-059-Q3	Water	8/6/2014 12:51:00 PM	8/6/2014	8/20/2014
N013132-030D	SA-MW-01D-059-Q3	Water	8/6/2014 12:51:00 PM	8/6/2014	8/20/2014
N013132-031A	SA-MW-01S-059-Q3	Water	8/6/2014 1:34:00 PM	8/6/2014	8/20/2014
N013132-031B	SA-MW-01S-059-Q3	Water	8/6/2014 1:34:00 PM	8/6/2014	8/20/2014
N013132-031C	SA-MW-01S-059-Q3	Water	8/6/2014 1:34:00 PM	8/6/2014	8/20/2014
N013132-031D	SA-MW-01S-059-Q3	Water	8/6/2014 1:34:00 PM	8/6/2014	8/20/2014
N013132-032A	SA-MW-02D-059-Q3	Water	8/6/2014 2:17:00 PM	8/6/2014	8/20/2014
N013132-032B	SA-MW-02D-059-Q3	Water	8/6/2014 2:17:00 PM	8/6/2014	8/20/2014
N013132-032C	SA-MW-02D-059-Q3	Water	8/6/2014 2:17:00 PM	8/6/2014	8/20/2014
N013132-032D	SA-MW-02D-059-Q3	Water	8/6/2014 2:17:00 PM	8/6/2014	8/20/2014
N013132-033A	SA-MW-02S-059-Q3	Water	8/6/2014 3:08:00 PM	8/6/2014	8/20/2014
N013132-033B	SA-MW-02S-059-Q3	Water	8/6/2014 3:08:00 PM	8/6/2014	8/20/2014
N013132-033C	SA-MW-02S-059-Q3	Water	8/6/2014 3:08:00 PM	8/6/2014	8/20/2014
N013132-033D	SA-MW-02S-059-Q3	Water	8/6/2014 3:08:00 PM	8/6/2014	8/20/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013132
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013132-034A	SA-MW-03D-059-Q3	Water	8/6/2014 10:01:00 AM	8/6/2014	8/20/2014
N013132-034B	SA-MW-03D-059-Q3	Water	8/6/2014 10:01:00 AM	8/6/2014	8/20/2014
N013132-034C	SA-MW-03D-059-Q3	Water	8/6/2014 10:01:00 AM	8/6/2014	8/20/2014
N013132-034D	SA-MW-03D-059-Q3	Water	8/6/2014 10:01:00 AM	8/6/2014	8/20/2014
N013132-035A	SA-MW-03S-059-Q3	Water	8/6/2014 9:05:00 AM	8/6/2014	8/20/2014
N013132-035B	SA-MW-03S-059-Q3	Water	8/6/2014 9:05:00 AM	8/6/2014	8/20/2014
N013132-035C	SA-MW-03S-059-Q3	Water	8/6/2014 9:05:00 AM	8/6/2014	8/20/2014
N013132-035D	SA-MW-03S-059-Q3	Water	8/6/2014 9:05:00 AM	8/6/2014	8/20/2014
N013132-036A	SA-MW-04D-059-Q3	Water	8/6/2014 10:57:00 AM	8/6/2014	8/20/2014
N013132-036B	SA-MW-04D-059-Q3	Water	8/6/2014 10:57:00 AM	8/6/2014	8/20/2014
N013132-036C	SA-MW-04D-059-Q3	Water	8/6/2014 10:57:00 AM	8/6/2014	8/20/2014
N013132-036D	SA-MW-04D-059-Q3	Water	8/6/2014 10:57:00 AM	8/6/2014	8/20/2014
N013132-037A	MW-909-059-Q3	Water	8/6/2014 11:52:00 AM	8/6/2014	8/20/2014
N013132-037B	MW-909-059-Q3	Water	8/6/2014 11:52:00 AM	8/6/2014	8/20/2014
N013132-037C	MW-909-059-Q3	Water	8/6/2014 11:52:00 AM	8/6/2014	8/20/2014
N013132-037D	MW-909-059-Q3	Water	8/6/2014 11:52:00 AM	8/6/2014	8/20/2014
N013132-038A	SA-MW-04S-059-Q3	Water	8/6/2014 11:51:00 AM	8/6/2014	8/20/2014
N013132-038B	SA-MW-04S-059-Q3	Water	8/6/2014 11:51:00 AM	8/6/2014	8/20/2014
N013132-038C	SA-MW-04S-059-Q3	Water	8/6/2014 11:51:00 AM	8/6/2014	8/20/2014
N013132-038D	SA-MW-04S-059-Q3	Water	8/6/2014 11:51:00 AM	8/6/2014	8/20/2014
N013132-039A	SC-MW-08D-059-Q3	Water	8/6/2014 3:21:00 PM	8/6/2014	8/20/2014
N013132-039B	SC-MW-08D-059-Q3	Water	8/6/2014 3:21:00 PM	8/6/2014	8/20/2014
N013132-039C	SC-MW-08D-059-Q3	Water	8/6/2014 3:21:00 PM	8/6/2014	8/20/2014
N013132-039D	SC-MW-08D-059-Q3	Water	8/6/2014 3:21:00 PM	8/6/2014	8/20/2014



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-017

Client Sample ID: EX-21-059-Q3
Collection Date: 8/6/2014 8:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	430	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-018

Client Sample ID: EX-22-059-Q3
Collection Date: 8/6/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	870	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-019

Client Sample ID: MW-08-059-Q3
Collection Date: 8/6/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	330	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-021

Client Sample ID: MW-10-059-Q3
Collection Date: 8/6/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	960	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-022

Client Sample ID: MW-908-059-Q3
Collection Date: 8/6/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	970	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-025

Client Sample ID: MW-13-059-Q3
Collection Date: 8/6/2014 10:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	980	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	960	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL FILTERABLE RESIDUE

SM2540C

RunID: WETCHEM_140807B	QC Batch: 46272			PrepDate	8/7/2014	Analyst: LCC
Total Dissolved Solids (Residue, Filterable)	1200	10	10	mg/L	1	8/7/2014 07:35 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_W

Sample ID MB-46272	SampType: MBLK	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 8/7/2014	RunNo: 94475						
Client ID: PBW	Batch ID: 46272	TestNo: SM2540C		Analysis Date: 8/7/2014	SeqNo: 1821566						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		ND	10								

Sample ID LCS-46272	SampType: LCS	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 8/7/2014	RunNo: 94475						
Client ID: LCSW	Batch ID: 46272	TestNo: SM2540C		Analysis Date: 8/7/2014	SeqNo: 1821567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		941.000	10	1000	0	94.1	80	120			

Sample ID N013132-017D-DUP	SampType: DUP	TestCode: 160.1_2540C	Units: mg/L	Prep Date: 8/7/2014	RunNo: 94475						
Client ID: ZZZZZ	Batch ID: 46272	TestNo: SM2540C		Analysis Date: 8/7/2014	SeqNo: 1821569						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		415.000	10					426.0	2.62	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP-MS

EPA 200.8

RunID: ICP7_140813A	QC Batch: 46301			PrepDate	8/12/2014	Analyst: CEI
Uranium	40	0.011	0.67	pCi/L	1	8/13/2014 01:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID MB-46301	SampType: MBLK	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 8/12/2014	RunNo: 94531
Client ID: PBW	Batch ID: 46301	TestNo: EPA 200.8		Analysis Date: 8/13/2014	SeqNo: 1823926
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	ND	0.67			
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Sample ID LCS-46301	SampType: LCS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 8/12/2014	RunNo: 94531
Client ID: LCSW	Batch ID: 46301	TestNo: EPA 200.8		Analysis Date: 8/13/2014	SeqNo: 1823927
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	7.670	0.67	6.700	0	114 85 115
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Sample ID N013132-027B-MS	SampType: MS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 8/12/2014	RunNo: 94531
Client ID: ZZZZZZ	Batch ID: 46301	TestNo: EPA 200.8		Analysis Date: 8/13/2014	SeqNo: 1823931
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	44.271	0.67	6.700	39.64	69.1 75 125 S
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Sample ID N013132-027B-MSD	SampType: MSD	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date: 8/12/2014	RunNo: 94531
Client ID: ZZZZZZ	Batch ID: 46301	TestNo: EPA 200.8		Analysis Date: 8/13/2014	SeqNo: 1823932
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Uranium	44.124	0.67	6.700	39.64	66.9 75 125 44.27 0.332 20 S
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-001

Client Sample ID: CA-MW-309-059-Q3
Collection Date: 8/6/2014 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 11:45 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 12:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-002

Client Sample ID: CA-MW-310D-059-Q3
Collection Date: 8/6/2014 10:45:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	7.5	0.016	0.20		µg/L	1	8/8/2014 10:45 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	8.0	0.030	1.0		µg/L	1	8/8/2014 12:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-003

Client Sample ID: CA-MW-310S-059-Q3
Collection Date: 8/6/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	3.8	0.016	0.20		µg/L	1	8/8/2014 11:15 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	4.1	0.030	1.0		µg/L	1	8/8/2014 12:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-004

Client Sample ID: CA-MW-408-059-Q3
Collection Date: 8/6/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	11	0.016	0.20		µg/L	1	8/8/2014 12:25 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	11	0.030	1.0		µg/L	1	8/8/2014 12:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-005

Client Sample ID: CA-MW-411D-059-Q3
Collection Date: 8/6/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	2.3	0.016	0.20		µg/L	1	8/8/2014 12:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	8/8/2014 12:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-006

Client Sample ID: CA-MW-411S-059-Q3
Collection Date: 8/6/2014 2:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	25	0.080	1.0		µg/L	5	8/8/2014 03:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	25	0.030	1.0		µg/L	1	8/8/2014 12:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-007

Client Sample ID: CA-MW-412D-059-Q3
Collection Date: 8/6/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	28	0.080	1.0		µg/L	5	8/8/2014 04:03 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	29	0.030	1.0		µg/L	1	8/8/2014 12:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-008

Client Sample ID: MW-711-059-Q3
Collection Date: 8/6/2014 3:40:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 01:28 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 01:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-009

Client Sample ID: MW-712-059-Q3
Collection Date: 8/6/2014 2:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 02:00 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 01:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-010

Client Sample ID: SA-MW-05D-059-Q3
Collection Date: 8/6/2014 1:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	3900	16	200		µg/L	1000	8/8/2014 04:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	4100	1.5	50		µg/L	50	8/8/2014 08:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-011

Client Sample ID: SA-MW-05S-059-Q3
Collection Date: 8/6/2014 12:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	0.24	0.016	0.20		µg/L	1	8/8/2014 01:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 01:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-012

Client Sample ID: SA-MW-06D-059-Q3
Collection Date: 8/6/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	51	0.16	2.0		µg/L	10	8/8/2014 04:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	54	0.030	1.0		µg/L	1	8/8/2014 01:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-013

Client Sample ID: SA-MW-06S-059-Q3
Collection Date: 8/6/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	520	1.6	20		µg/L	100	8/8/2014 04:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	570	0.15	5.0		µg/L	5	8/8/2014 08:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-014

Client Sample ID: SA-MW-10D-059-Q3
Collection Date: 8/6/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	400	0.80	10		µg/L	50	8/8/2014 05:43 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	430	0.15	5.0		µg/L	5	8/8/2014 09:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-015

Client Sample ID: SA-MW-10S-059-Q3
Collection Date: 8/6/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	87	0.16	2.0		µg/L	10	8/8/2014 05:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	91	0.030	1.0		µg/L	1	8/8/2014 01:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-016

Client Sample ID: MW-713-059-Q3
Collection Date: 8/6/2014 8:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 02:31 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 02:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-017

Client Sample ID: EX-21-059-Q3
Collection Date: 8/6/2014 8:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 03:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-018

Client Sample ID: EX-22-059-Q3
Collection Date: 8/6/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	8/8/2014 05:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	7.4	0.030	1.0		µg/L	1	8/8/2014 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-019

Client Sample ID: MW-08-059-Q3
Collection Date: 8/6/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 03:12 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 02:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 01:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-020

Client Sample ID: MW-09-059-Q3
Collection Date: 8/6/2014 10:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808A	QC Batch: R94492				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	8/8/2014 03:13 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	8/8/2014 01:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-021

Client Sample ID: MW-10-059-Q3
Collection Date: 8/6/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	22	0.080	1.0		µg/L	5	8/8/2014 03:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	23	0.030	1.0		µg/L	1	8/8/2014 01:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-022

Client Sample ID: MW-908-059-Q3
Collection Date: 8/6/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	22	0.16	2.0		µg/L	10	8/8/2014 03:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	23	0.030	1.0		µg/L	1	8/8/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-023

Client Sample ID: MW-12A-059-Q3
Collection Date: 8/6/2014 11:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 03:33 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 10:47 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 02:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-024

Client Sample ID: MW-12B-059-Q3
Collection Date: 8/6/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	12	0.016	0.20		µg/L	1	8/8/2014 03:39 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	13	0.030	1.0		µg/L	1	8/8/2014 02:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-025

Client Sample ID: MW-13-059-Q3
Collection Date: 8/6/2014 10:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	22	0.080	1.0		µg/L	5	8/8/2014 03:48 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	23	0.030	1.0		µg/L	1	8/8/2014 02:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	4.5	0.016	0.20		µg/L	1	8/8/2014 11:16 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	4.4	0.030	1.0		µg/L	1	8/8/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	29	0.080	1.0		µg/L	5	8/8/2014 04:17 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	29	0.030	1.0		µg/L	1	8/8/2014 02:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-028

Client Sample ID: MW-18-059-Q3
Collection Date: 8/6/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489			PrepDate			Analyst: RB
Hexavalent Chromium	53	0.080	1.0	µg/L	5		8/8/2014 04:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-029

Client Sample ID: MW-714-059-Q3
Collection Date: 8/6/2014 11:09:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 03:54 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 11:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-030

Client Sample ID: SA-MW-01D-059-Q3
Collection Date: 8/6/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	390	0.80	10		µg/L	50	8/8/2014 04:36 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	430	0.15	5.0		µg/L	5	8/8/2014 09:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-031

Client Sample ID: SA-MW-01S-059-Q3
Collection Date: 8/6/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	400	0.80	10		µg/L	50	8/8/2014 04:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	450	0.15	5.0		µg/L	5	8/8/2014 09:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-032

Client Sample ID: SA-MW-02D-059-Q3
Collection Date: 8/6/2014 2:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 12:22 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	8/8/2014 03:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-033

Client Sample ID: SA-MW-02S-059-Q3
Collection Date: 8/6/2014 3:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	1200	1.6	20		µg/L	100	8/8/2014 04:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	1300	0.30	10		µg/L	10	8/8/2014 09:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-034

Client Sample ID: SA-MW-03D-059-Q3
Collection Date: 8/6/2014 10:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 12:41 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 03:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-035

Client Sample ID: SA-MW-03S-059-Q3
Collection Date: 8/6/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 01:00 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/8/2014 03:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-036

Client Sample ID: SA-MW-04D-059-Q3
Collection Date: 8/6/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	110	0.32	4.0		µg/L	20	8/8/2014 06:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	120	0.030	1.0		µg/L	1	8/8/2014 03:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-037

Client Sample ID: MW-909-059-Q3
Collection Date: 8/6/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	220	0.32	4.0		µg/L	20	8/8/2014 08:04 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	250	0.15	5.0		µg/L	5	8/8/2014 09:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-038

Client Sample ID: SA-MW-04S-059-Q3
Collection Date: 8/6/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	220	0.32	4.0		µg/L	20	8/8/2014 07:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	240	0.15	5.0		µg/L	5	8/8/2014 10:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-039

Client Sample ID: SC-MW-08D-059-Q3
Collection Date: 8/6/2014 3:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	1.4	0.016	0.20		µg/L	1	8/8/2014 01:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Chromium	1.6	0.030	1.0		µg/L	1	8/8/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94527	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: PBW	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823811						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium ND 0.060

Sample ID LCS-R94527	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: LCSW	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823812						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.209 0.060 0.2000 0 104 90 110

Sample ID N013132-008ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823814						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.020 0.060 0.01277 0 20

Sample ID N013132-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823815						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.200 0.060 0.2000 0.01277 93.5 90 110

Sample ID N013132-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823817						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium 0.214 0.060 0.2000 0.01326 100 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013132-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01326	102	90	110	0.2137	2.00	20	

Sample ID N013132-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01675	98.4	90	110				

Sample ID N013132-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823824						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.230	0.060	0.2000	0.04077	94.5	90	110				

Sample ID N013132-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02312	96.3	90	110				

Sample ID N013132-029AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01655	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013139-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823830						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01366	101	90	110				

Sample ID N013139-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823832						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013139-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823836						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01876	97.2	90	110				

Sample ID N013139-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823838						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02447	97.5	90	110				

Sample ID N013139-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0.02613	90.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013142-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.203	0.060	0.2000	0.01268	95.0	90	110
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Sample ID N013142-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823844						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.209	0.060	0.2000	0.01360	97.5	90	110
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Sample ID N013142-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.216	0.060	0.2000	0.01665	99.5	90	110
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Sample ID N013142-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.210	0.060	0.2000	0.01450	97.7	90	110
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Sample ID N013108-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.213	0.060	0.2000	0.01964	96.5	90	110
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: MB-R94489	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: PBW	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID: LCS-R94489	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: LCSW	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.921	0.20	5.000	0	98.4	90	110				
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Sample ID: N013132-023ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822456						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0.01750	0	20	
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Sample ID: N013132-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822457						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.023	0.20	1.000	0.01750	101	90	110				
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Sample ID: N013132-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	9.390	0.20	5.000	4.472	98.4	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-026A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.402	0.20	5.000	4.472	98.6	90	110	9.390	0.132	20	

Sample ID N013132-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822462						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N013132-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822466						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				

Sample ID N013132-034A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822468						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.015	0.20	1.000	0	101	90	110				

Sample ID N013132-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822470						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.029	0.20	1.000	0	103	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-039A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.392	0.20	1.000	1.417	97.5	90	110				

Sample ID N013133-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822474							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.943	0.20	5.000	3.033	98.2	90	110				

Sample ID N013138-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822478							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.720	0.20	5.000	1.631	102	90	110				

Sample ID N013138-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822480							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.530	0.20	5.000	1.634	97.9	90	110				

Sample ID N013108-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822482							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0	101	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
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| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-003A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822565						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.824	0.20	5.000	3.790	101	90	110	8.807	0.195	20	

Sample ID N013132-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822567						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.057	0.20	1.000	0	106	90	110				

Sample ID N013132-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822571						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	16.259	0.20	5.000	11.40	97.2	90	110				

Sample ID N013132-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822573						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.250	0.20	5.000	2.287	99.3	90	110				

Sample ID N013132-008A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822575						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.014	0.20	1.000	0	101	90	110				

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822577						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.022	0.20	1.000	0.05140	97.0	90	110				

Sample ID N013132-011A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822579						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.243	0.20	5.000	0.2383	100	90	110				

Sample ID N013132-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822583						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0	102	90	110				

Sample ID N013132-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822585						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.072	0.20	1.000	0	107	90	110				

Sample ID N013132-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822587						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.667	0.20	1.000	1.613	105	90	110				

Qualifiers:

- | | | |
|---|--|--|
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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822597							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0	102	90	110				

Sample ID N013132-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94492						
Client ID: ZZZZZZ	Batch ID: R94492	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822600							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.296	0.20	1.000	1.356	94.0	90	110				

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94493	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: PBW	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822611						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94493	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: LCSW	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822612						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.009	0.20	5.000	0	100	90	110				
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Sample ID N013139-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N013139-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				
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Sample ID N013139-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822618						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110	1.074	5.31	20	
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Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822623						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	15.597	0.20	5.000	10.59	100	90	110				

Sample ID N013139-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0	102	90	110				

Sample ID N013139-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.839	0.20	1.000	0.8476	99.2	90	110				

Sample ID N013139-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.857	0.20	1.000	0.8210	104	90	110				

Qualifiers:

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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46278	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: PBW	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821619						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46278	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: LCSW	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821620						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.127	1.0	10.00	0	101	85	115				
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Sample ID N013132-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821672						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.129	1.0	10.00	0.1415	99.9	75	125				
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Sample ID N013132-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.032	1.0	10.00	0.1415	98.9	75	125	10.13	0.967	20	
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Sample ID N013132-013B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821716						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	574.046	5.0	10.00	571.6	24.7	75	125				S
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Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
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ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46279	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: PBW	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821645						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46279	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: LCSW	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821646						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.349	1.0	10.00	0	103	85	115				
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Sample ID N013132-024B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821677						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	22.378	1.0	10.00	12.74	96.4	75	125				
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Sample ID N013132-024B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	22.551	1.0	10.00	12.74	98.1	75	125	22.38	0.771	20	
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Sample ID N013132-035B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821681						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.950	1.0	10.00	0.9515	100	75	125				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-001

Client Sample ID: CA-MW-309-059-Q3
Collection Date: 8/6/2014 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	140	0.50	10		mg/L	20	8/12/2014 01:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/7/2014 03:34 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	0.32	0.010	0.10		mg/L	2	8/7/2014 03:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-310D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/12/2014 01:36 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/7/2014 04:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	4.5	0.010	0.10		mg/L	2	8/7/2014 04:25 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-003

Client Sample ID: CA-MW-310S-059-Q3
Collection Date: 8/6/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	110	1.2	25		mg/L	50	8/12/2014 01:49 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/7/2014 06:18 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	2.3	0.010	0.10		mg/L	2	8/7/2014 06:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-004

Client Sample ID: CA-MW-408-059-Q3
Collection Date: 8/6/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	140	1.2	25		mg/L	50	8/12/2014 02:01 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.054	0.20		mg/L	2	8/7/2014 06:31 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	2.3	0.010	0.10		mg/L	2	8/7/2014 06:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-005

Client Sample ID: CA-MW-411D-059-Q3
Collection Date: 8/6/2014 1:19:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	90	0.50	10		mg/L	20	8/12/2014 03:43 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 06:44 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	4.7	0.026	0.25		mg/L	5	8/7/2014 09:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-006

Client Sample ID: CA-MW-411S-059-Q3
Collection Date: 8/6/2014 2:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	100	0.50	10		mg/L	20	8/12/2014 03:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 06:56 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	9.9	0.051	0.50		mg/L	10	8/7/2014 09:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-007

Client Sample ID: CA-MW-412D-059-Q3
Collection Date: 8/6/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	410	1.2	25		mg/L	50	8/12/2014 04:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.14	0.50		mg/L	5	8/7/2014 03:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	3.6	0.026	0.25		mg/L	5	8/7/2014 03:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-010

Client Sample ID: SA-MW-05D-059-Q3
Collection Date: 8/6/2014 1:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	64	1.2	25		mg/L	50	8/12/2014 04:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 07:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Sulfate	150	1.6	25		mg/L	50	8/12/2014 04:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	2.9	0.026	0.25		mg/L	5	8/7/2014 09:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-05S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 12:34:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-011	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Chloride	55	0.50	10		mg/L	20	8/12/2014 04:33 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 07:34 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812A	QC Batch: R94520				PrepDate		Analyst: PS
Sulfate	28	0.66	10		mg/L	20	8/12/2014 04:33 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	1.2	0.0051	0.050		mg/L	1	8/7/2014 07:34 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-012

Client Sample ID: SA-MW-06D-059-Q3
Collection Date: 8/6/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	50	1.2	25		mg/L	50	8/13/2014 12:00 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 03:59 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	75	1.6	25		mg/L	50	8/13/2014 12:00 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	0.11	0.0051	0.050		mg/L	1	8/7/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-013

Client Sample ID: SA-MW-06S-059-Q3
Collection Date: 8/6/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	56	1.2	25		mg/L	50	8/12/2014 05:54 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 04:12 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	65	1.6	25		mg/L	50	8/12/2014 05:54 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	1.8	0.0051	0.050		mg/L	1	8/7/2014 04:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-014

Client Sample ID: SA-MW-10D-059-Q3
Collection Date: 8/6/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	88	1.2	25		mg/L	50	8/12/2014 06:06 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 04:37 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	120	1.6	25		mg/L	50	8/12/2014 06:06 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	11	0.051	0.50		mg/L	10	8/7/2014 09:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-015

Client Sample ID: SA-MW-10S-059-Q3
Collection Date: 8/6/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	80	1.2	25		mg/L	50	8/12/2014 06:19 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 04:50 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	91	1.6	25		mg/L	50	8/12/2014 06:19 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	6.5	0.051	0.50		mg/L	10	8/7/2014 10:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-017

Client Sample ID: EX-21-059-Q3
Collection Date: 8/6/2014 8:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	74	1.6	25		mg/L	50	8/12/2014 06:32 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	1.5	0.0051	0.050		mg/L	1	8/7/2014 05:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-018

Client Sample ID: EX-22-059-Q3
Collection Date: 8/6/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	170	1.6	25		mg/L	50	8/12/2014 06:44 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	4.3	0.026	0.25		mg/L	5	8/7/2014 05:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-019

Client Sample ID: MW-08-059-Q3
Collection Date: 8/6/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807C** QC Batch: **R94479** PrepDate: Analyst: **PS**
Nitrate as N ND 0.0051 0.050 mg/L 1 8/8/2014 02:56 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT:	CH2M HILL	Client Sample ID:	MW-09-059-Q3
Lab Order:	N013132	Collection Date:	8/6/2014 10:11:00 AM
Project:	PGE Hinkley, 492581.UR.IR.FW	Matrix:	WATER
Lab ID:	N013132-020		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479	PrepDate	Analyst: PS
Nitrate as N	10 0.10	1.0	mg/L 20 8/8/2014 01:15 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-021

Client Sample ID: MW-10-059-Q3
Collection Date: 8/6/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807B** QC Batch: **R94470** PrepDate Analyst: **PS**
Nitrate as N 5.8 0.051 0.50 mg/L 10 8/7/2014 05:53 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-022

Client Sample ID: MW-908-059-Q3
Collection Date: 8/6/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807B** QC Batch: **R94470** PrepDate: Analyst: **PS**
Nitrate as N 5.7 0.051 0.50 mg/L 10 8/7/2014 06:06 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-023

Client Sample ID: MW-12A-059-Q3
Collection Date: 8/6/2014 11:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479			PrepDate			Analyst: PS
Nitrate as N	0.68	0.010	0.10	mg/L	2		8/8/2014 02:44 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-024

Client Sample ID: MW-12B-059-Q3
Collection Date: 8/6/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807C** QC Batch: **R94479** PrepDate Analyst: **PS**
Nitrate as N 1.7 0.010 0.10 mg/L 2 8/8/2014 05:02 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-025

Client Sample ID: MW-13-059-Q3
Collection Date: 8/6/2014 10:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807C** QC Batch: **R94479** PrepDate Analyst: **PS**
Nitrate as N 7.4 0.051 0.50 mg/L 10 8/8/2014 02:06 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807C** QC Batch: **R94479** PrepDate Analyst: **PS**
Nitrate as N 3.3 0.026 0.25 mg/L 5 8/8/2014 03:59 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-028

Client Sample ID: MW-18-059-Q3
Collection Date: 8/6/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: **IC2_140807C** QC Batch: **R94479** PrepDate Analyst: **PS**
Nitrate as N 5.6 0.026 0.25 mg/L 5 8/8/2014 04:25 AM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
 S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
 DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-030

Client Sample ID: SA-MW-01D-059-Q3
Collection Date: 8/6/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	51	1.2	25		mg/L	50	8/12/2014 06:57 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 08:12 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	81	1.6	25		mg/L	50	8/12/2014 06:57 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	2.1	0.0051	0.050		mg/L	1	8/7/2014 08:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-031

Client Sample ID: SA-MW-01S-059-Q3
Collection Date: 8/6/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	50	0.50	10		mg/L	20	8/12/2014 07:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 08:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	52	0.66	10		mg/L	20	8/12/2014 07:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	0.95	0.0051	0.050		mg/L	1	8/7/2014 08:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-02D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 2:17:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	56	0.50	10		mg/L	20	8/12/2014 07:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 04:37 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	9.9	0.033	0.50		mg/L	1	8/12/2014 07:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/8/2014 04:37 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-033

Client Sample ID: SA-MW-02S-059-Q3
Collection Date: 8/6/2014 3:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	44	0.50	10		mg/L	20	8/12/2014 07:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 04:50 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	85	0.66	10		mg/L	20	8/12/2014 07:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	2.7	0.010	0.10		mg/L	2	8/8/2014 07:59 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-03D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-034	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521	PrepDate	Analyst: PS
Chloride	55 0.50	10	mg/L
			20 8/12/2014 08:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479	PrepDate	Analyst: PS
Orthophosphate, Dissolved (as P)	ND 0.027	0.10	mg/L
			1 8/8/2014 02:18 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521	PrepDate	Analyst: PS
Sulfate	82 0.66	10	mg/L
			20 8/12/2014 08:25 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479	PrepDate	Analyst: PS
Nitrate as N	ND 0.0051	0.050	mg/L
			1 8/8/2014 02:18 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-035

Client Sample ID: SA-MW-03S-059-Q3
Collection Date: 8/6/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	54	0.50	10		mg/L	20	8/12/2014 08:38 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/7/2014 07:09 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	83	0.66	10		mg/L	20	8/12/2014 08:38 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807B	QC Batch: R94470				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/7/2014 07:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-036

Client Sample ID: SA-MW-04D-059-Q3
Collection Date: 8/6/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	43	0.50	10		mg/L	20	8/12/2014 08:51 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 02:31 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	56	0.66	10		mg/L	20	8/12/2014 08:51 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	1.2	0.0051	0.050		mg/L	1	8/8/2014 02:31 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-037

Client Sample ID: MW-909-059-Q3
Collection Date: 8/6/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	55	0.50	10		mg/L	20	8/12/2014 09:03 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 03:47 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	84	0.66	10		mg/L	20	8/12/2014 09:03 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	3.7	0.026	0.25		mg/L	5	8/8/2014 07:09 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-038

Client Sample ID: SA-MW-04S-059-Q3
Collection Date: 8/6/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	54	0.50	10		mg/L	20	8/12/2014 09:16 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 03:09 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	85	0.66	10		mg/L	20	8/12/2014 09:16 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	3.6	0.026	0.25		mg/L	5	8/8/2014 06:56 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-039

Client Sample ID: SC-MW-08D-059-Q3
Collection Date: 8/6/2014 3:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	120	1.2	25		mg/L	50	8/12/2014 09:28 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 05:15 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140807C	QC Batch: R94479				PrepDate		Analyst: PS
Nitrate as N	15	0.051	0.50		mg/L	10	8/8/2014 07:21 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94520_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94520			
Client ID:	PBW	Batch ID:	R94520	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823421			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		ND		0.50										
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Sample ID	LCS-R94520_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94520			
Client ID:	LCSW	Batch ID:	R94520	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823422			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		2.428		0.50	2.500	0		97.1	90	110				
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Sample ID	N013129-033C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94520			
Client ID:	ZZZZZ	Batch ID:	R94520	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823440			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		42.220		10							42.30	0.189	20	
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Sample ID	N013129-035C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94520			
Client ID:	ZZZZZ	Batch ID:	R94520	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823441			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		43.180		10							44.18	2.29	20	
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Sample ID	N013129-033C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94520			
Client ID:	ZZZZZ	Batch ID:	R94520	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823442			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride		91.860		10	50.00	42.30		99.1	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013129-033C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZZ	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823445						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	91.480	10	50.00	42.30	98.4	80	120	91.86	0.415	20	

Sample ID N013129-035C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZZ	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823446						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	92.600	10	50.00	44.18	96.8	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID MB-R94521_CL	SampType: MBLK	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: PBW	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823643						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.50

Sample ID LCS-R94521_CL	SampType: LCS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: LCSW	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823644						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2.435 0.50 2.500 0 97.4 90 110

Sample ID N013132-036C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823662						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 44.260 10 43.36 2.05 20

Sample ID N013132-037C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823663						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 54.700 10 54.62 0.146 20

Sample ID N013132-036C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823664						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 92.140 10 50.00 43.36 97.6 80 120

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013132-037C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	103.280	10	50.00	54.62	97.3	80	120				

Sample ID N013132-037C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	102.880	10	50.00	54.62	96.5	80	120	103.3	0.388	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94470_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: PBW	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1821461						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94470_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: LCSW	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1821462						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.297 0.10 2.500 0 91.9 90 110

Sample ID N013132-001C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1821485						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.20 0 0 20

Sample ID N013132-013C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1821486						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.566 0.10 2.500 0 103 80 120

Sample ID N013132-013C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1821487						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.521 0.10 2.500 0 101 80 120 2.566 1.77 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID N013132-001C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZZ	Batch ID: R94470	TestNo: EPA 300.0	Analysis Date: 8/7/2014	SeqNo: 1821488							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	4.416	0.20	5.000	0	88.3	80	120				
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Sample ID N013132-013C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZZ	Batch ID: R94470	TestNo: EPA 300.0	Analysis Date: 8/7/2014	SeqNo: 1822632							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	ND	0.10						0	0	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94479_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: PBW	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821774						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94479_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: LCSW	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821775						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.396 0.10 2.500 0 95.8 90 110

Sample ID N013132-039C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: ZZZZZ	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821787						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N013132-039C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: ZZZZZ	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821788						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.888 0.10 2.500 0 75.5 80 120 S

Sample ID N013132-039C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: ZZZZZ	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821791						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.957 0.10 2.500 0 78.3 80 120 1.888 3.59 20 S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94520_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: PBW	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	ND	0.50									
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Sample ID LCS-R94520_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: LCSW	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	4.732	0.50	5.000	0	94.6	90	110				
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Sample ID N013129-033C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZ	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823467						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	73.040	10						77.10	5.41	20	
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Sample ID N013129-035C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZ	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823468						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	62.280	10						63.70	2.25	20	
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Sample ID N013129-033C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZ	Batch ID: R94520	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823469						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	172.880	10	100.0	77.10	95.8	80	120				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013129-033C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZZ	Batch ID: R94520	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823472							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	171.840	10	100.0	77.10	94.7	80	120	172.9	0.603	20	

Sample ID N013129-035C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94520						
Client ID: ZZZZZZ	Batch ID: R94520	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823473							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	161.380	10	100.0	63.70	97.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013132-037C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823703							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	181.200	10	100.0	84.26	96.9	80	120				

Sample ID N013132-037C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823706							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	180.260	10	100.0	84.26	96.0	80	120	181.2	0.520	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013132-015C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	15.900	0.50	10.00	6.530	93.7	80	120	15.90	0	20	

Sample ID N013132-015C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1822633						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	6.480	0.50						6.530	0.769	20	

Sample ID N013132-013C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94470						
Client ID: ZZZZZZ	Batch ID: R94470	TestNo: EPA 300.0		Analysis Date: 8/7/2014	SeqNo: 1822634						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.719	0.050						1.757	2.19	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013132-025C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: ZZZZZZ	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821765						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	7.150	0.50						7.430	3.84	20	

Sample ID N013132-025C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94479						
Client ID: ZZZZZZ	Batch ID: R94479	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821766						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	16.630	0.50	10.00	7.430	92.0	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-001

Client Sample ID: CA-MW-309-059-Q3
Collection Date: 8/6/2014 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140812A	QC Batch: R94525			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/12/2014 08:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-310D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140812A	QC Batch: R94525	PrepDate	Analyst: PS
Organic Carbon, Total	ND 0.041	1.0	mg/L 1 8/12/2014 08:32 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-310S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140812A	QC Batch: R94525			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/12/2014 08:55 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-004

Client Sample ID: CA-MW-408-059-Q3
Collection Date: 8/6/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140812A	QC Batch: R94525			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/12/2014 09:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-411D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-411S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 2:00:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 02:37 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-412D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 9:08:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 03:00 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-010

Client Sample ID: SA-MW-05D-059-Q3
Collection Date: 8/6/2014 1:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 03:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-011

Client Sample ID: SA-MW-05S-059-Q3
Collection Date: 8/6/2014 12:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 03:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-012

Client Sample ID: SA-MW-06D-059-Q3
Collection Date: 8/6/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 04:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-013

Client Sample ID: SA-MW-06S-059-Q3
Collection Date: 8/6/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 05:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-014

Client Sample ID: SA-MW-10D-059-Q3
Collection Date: 8/6/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 05:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-10S-059-Q3
Lab Order: N013132 **Collection Date:** 8/6/2014 11:31:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013132-015

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

TOTAL ORGANIC CARBON

SM 5310C

RunID: **TOC2_140813A** QC Batch: **R94550** PrepDate Analyst: **PS**
Organic Carbon, Total ND 0.041 1.0 mg/L 1 8/13/2014 06:04 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 06:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 06:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-030

Client Sample ID: SA-MW-01D-059-Q3
Collection Date: 8/6/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	8/13/2014 07:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-031

Client Sample ID: SA-MW-01S-059-Q3
Collection Date: 8/6/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 07:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-032

Client Sample ID: SA-MW-02D-059-Q3
Collection Date: 8/6/2014 2:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	8/13/2014 08:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-033

Client Sample ID: SA-MW-02S-059-Q3
Collection Date: 8/6/2014 3:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 09:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-034

Client Sample ID: SA-MW-03D-059-Q3
Collection Date: 8/6/2014 10:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 09:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-035

Client Sample ID: SA-MW-03S-059-Q3
Collection Date: 8/6/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 09:54 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-036

Client Sample ID: SA-MW-04D-059-Q3
Collection Date: 8/6/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 10:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-037

Client Sample ID: MW-909-059-Q3
Collection Date: 8/6/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 10:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-04S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 11:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-038	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140813A	QC Batch: R94550			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/13/2014 11:03 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-039

Client Sample ID: SC-MW-08D-059-Q3
Collection Date: 8/6/2014 3:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	8/15/2014 01:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94525	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94525
Client ID: PBW	Batch ID: R94525	TestNo: SM 5310C		Analysis Date: 8/12/2014	SeqNo: 1823747
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94525	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94525
Client ID: LCSW	Batch ID: R94525	TestNo: SM 5310C		Analysis Date: 8/12/2014	SeqNo: 1823748
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.510 1.0 10.00 0 105 85 115

Sample ID N013129-015D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94525
Client ID: ZZZZZ	Batch ID: R94525	TestNo: SM 5310C		Analysis Date: 8/12/2014	SeqNo: 1823749
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.485 1.0 10.00 0.6961 97.9 75 125

Sample ID N013129-015D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94525
Client ID: ZZZZZ	Batch ID: R94525	TestNo: SM 5310C		Analysis Date: 8/12/2014	SeqNo: 1823750
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Organic Carbon, Total 10.605 1.0 10.00 0.6961 99.1 75 125 10.48 1.14 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94550	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94550						
Client ID: PBW	Batch ID: R94550	TestNo: SM 5310C		Analysis Date: 8/13/2014	SeqNo: 1824353						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	ND	1.0									
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Sample ID LCS-R94550	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94550						
Client ID: LCSW	Batch ID: R94550	TestNo: SM 5310C		Analysis Date: 8/13/2014	SeqNo: 1824354						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	10.455	1.0	10.00	0	105	85	115				
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Sample ID N013132-005D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94550						
Client ID: ZZZZZ	Batch ID: R94550	TestNo: SM 5310C		Analysis Date: 8/13/2014	SeqNo: 1824355						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	10.329	1.0	10.00	0.9523	93.8	75	125				
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Sample ID N013132-005D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94550						
Client ID: ZZZZZ	Batch ID: R94550	TestNo: SM 5310C		Analysis Date: 8/13/2014	SeqNo: 1824356						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total	10.668	1.0	10.00	0.9523	97.2	75	125	10.33	3.23	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94553	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: PBW	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94553	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: LCSW	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.481 1.0 10.00 0 105 85 115

Sample ID N013139-015D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: ZZZZZ	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.483 1.0 10.00 0.9091 95.7 75 125

Sample ID N013139-015D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: ZZZZZ	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.480 1.0 10.00 0.9091 95.7 75 125 10.48 0.0210 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-001

Client Sample ID: CA-MW-309-059-Q3
Collection Date: 8/6/2014 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	0.24	0.0013	0.020	mg/L	1	8/8/2014 04:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-310D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 04:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-310S-059-Q3
Lab Order: N013132 **Collection Date:** 8/6/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013132-003

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140808B** QC Batch: **46280** PrepDate: **8/8/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/8/2014 04:48 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-004

Client Sample ID: CA-MW-408-059-Q3
Collection Date: 8/6/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 04:53 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** CA-MW-411D-059-Q3
Lab Order: N013132 **Collection Date:** 8/6/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013132-005

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140808B** QC Batch: **46280** PrepDate: **8/8/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/8/2014 04:58 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-411S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 2:00:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-006	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280	PrepDate	8/8/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/8/2014 05:03 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-412D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 9:08:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280	PrepDate	8/8/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/8/2014 05:08 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-010

Client Sample ID: SA-MW-05D-059-Q3
Collection Date: 8/6/2014 1:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 05:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-011

Client Sample ID: SA-MW-05S-059-Q3
Collection Date: 8/6/2014 12:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI	
Iron	0.028	0.0013	0.020	mg/L	1	8/8/2014 05:43 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-012

Client Sample ID: SA-MW-06D-059-Q3
Collection Date: 8/6/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 05:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-013

Client Sample ID: SA-MW-06S-059-Q3
Collection Date: 8/6/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 05:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-014

Client Sample ID: SA-MW-10D-059-Q3
Collection Date: 8/6/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 05:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-015

Client Sample ID: SA-MW-10S-059-Q3
Collection Date: 8/6/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 06:07 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-017

Client Sample ID: EX-21-059-Q3
Collection Date: 8/6/2014 8:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI	
Iron	1.8	0.0013	0.020	mg/L	1	8/8/2014 06:13 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-018

Client Sample ID: EX-22-059-Q3
Collection Date: 8/6/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	0.44	0.0013	0.020	mg/L	1	8/8/2014 06:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-019

Client Sample ID: MW-08-059-Q3
Collection Date: 8/6/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 06:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** MW-09-059-Q3
Lab Order: N013132 **Collection Date:** 8/6/2014 10:11:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013132-020

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140808B** QC Batch: **46280** PrepDate: **8/8/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/8/2014 06:36 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-021

Client Sample ID: MW-10-059-Q3
Collection Date: 8/6/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 06:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-022

Client Sample ID: MW-908-059-Q3
Collection Date: 8/6/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 06:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-023

Client Sample ID: MW-12A-059-Q3
Collection Date: 8/6/2014 11:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46280			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 06:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-024

Client Sample ID: MW-12B-059-Q3
Collection Date: 8/6/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 07:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-025

Client Sample ID: MW-13-059-Q3
Collection Date: 8/6/2014 10:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 07:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 07:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 07:51 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-028

Client Sample ID: MW-18-059-Q3
Collection Date: 8/6/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 07:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-01D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 12:51:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-030	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281	PrepDate	8/8/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L	1 8/8/2014 08:01 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-031

Client Sample ID: SA-MW-01S-059-Q3
Collection Date: 8/6/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 08:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-02D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 2:17:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	3.9	0.0013	0.020	mg/L	1	8/8/2014 08:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-033

Client Sample ID: SA-MW-02S-059-Q3
Collection Date: 8/6/2014 3:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 08:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-03D-059-Q3
Lab Order: N013132 **Collection Date:** 8/6/2014 10:01:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013132-034

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140808B** QC Batch: **46281** PrepDate: **8/8/2014** Analyst: **CEI**
Iron 2.5 0.0013 0.020 mg/L 1 8/8/2014 08:20 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-035

Client Sample ID: SA-MW-03S-059-Q3
Collection Date: 8/6/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	2.5	0.0013	0.020	mg/L	1	8/8/2014 08:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-036

Client Sample ID: SA-MW-04D-059-Q3
Collection Date: 8/6/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 08:56 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-037

Client Sample ID: MW-909-059-Q3
Collection Date: 8/6/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 09:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-04S-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 11:51:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-038	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 09:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-039

Client Sample ID: SC-MW-08D-059-Q3
Collection Date: 8/6/2014 3:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140808B	QC Batch: 46281			PrepDate	8/8/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/8/2014 09:13 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46280	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482
Client ID: PBW	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822073
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron ND 0.020

Sample ID LCS-46280	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482
Client ID: LCSW	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822074
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.107 0.020 0.1000 0 107 85 115

Sample ID N013132-002B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482
Client ID: ZZZZZZ	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822080
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.107 0.020 0.1000 0.002975 104 75 125

Sample ID N013132-002B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482
Client ID: ZZZZZZ	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822081
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.109 0.020 0.1000 0.002975 106 75 125 0.1067 2.53 20

Sample ID N013132-014B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482
Client ID: ZZZZZZ	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822098
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Iron 0.104 0.020 0.1000 0 104 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46281	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482						
Client ID: PBW	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822109						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 0.020

Sample ID LCS-46281	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482						
Client ID: LCSW	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822110						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.105 0.020 0.1000 0 105 85 115

Sample ID N013132-025B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482						
Client ID: ZZZZZZ	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822114						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.105 0.020 0.1000 0 105 75 125

Sample ID N013132-025B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482						
Client ID: ZZZZZZ	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822117						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.105 0.020 0.1000 0 105 75 125 0.1047 0.0285 20

Sample ID N013132-036B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/8/2014	RunNo: 94482						
Client ID: ZZZZZZ	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1822134						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.108 0.020 0.1000 0.002321 105 75 125

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-001

Client Sample ID: CA-MW-309-059-Q3
Collection Date: 8/6/2014 9:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	5.6	0.027	0.10	µg/L	1	8/8/2014 12:14 PM
Manganese	1600	0.64	12	µg/L	25	8/8/2014 07:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-310D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 10:45:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI	
Arsenic	0.61	0.027	0.10	µg/L	1	8/8/2014 12:19 PM	
Manganese	3.6	0.026	0.50	µg/L	1	8/8/2014 12:19 PM	

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-003

Client Sample ID: CA-MW-310S-059-Q3
Collection Date: 8/6/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.0	0.027	0.10	µg/L	1	8/8/2014 12:25 PM
Manganese	240	0.13	2.5	µg/L	5	8/8/2014 08:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-004

Client Sample ID: CA-MW-408-059-Q3
Collection Date: 8/6/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.54	0.027	0.10	µg/L	1	8/8/2014 12:30 PM
Manganese	340	0.13	2.5	µg/L	5	8/8/2014 08:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-411D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 1:19:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI	
Arsenic	1.6	0.027	0.10		µg/L	1	8/8/2014 12:36 PM
Manganese	ND	0.026	0.50		µg/L	1	8/8/2014 12:36 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-006

Client Sample ID: CA-MW-411S-059-Q3
Collection Date: 8/6/2014 2:00:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	8/8/2014 12:41 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 12:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL	Client Sample ID: CA-MW-412D-059-Q3
Lab Order: N013132	Collection Date: 8/6/2014 9:08:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013132-007	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

	EPA 3010A			EPA 6020			
RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI	
Arsenic	0.96	0.027	0.10		µg/L	1	8/8/2014 12:47 PM
Manganese	ND	0.026	0.50		µg/L	1	8/8/2014 12:47 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-010

Client Sample ID: SA-MW-05D-059-Q3
Collection Date: 8/6/2014 1:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.7	0.027	0.10	µg/L	1	8/8/2014 12:52 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 12:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-011

Client Sample ID: SA-MW-05S-059-Q3
Collection Date: 8/6/2014 12:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	9.2	0.027	0.10	µg/L	1	8/8/2014 01:09 PM
Manganese	1100	0.26	5.0	µg/L	10	8/8/2014 08:41 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-012

Client Sample ID: SA-MW-06D-059-Q3
Collection Date: 8/6/2014 8:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	12	0.027	0.10	µg/L	1	8/8/2014 01:14 PM
Manganese	890	0.26	5.0	µg/L	10	8/8/2014 08:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-013

Client Sample ID: SA-MW-06S-059-Q3
Collection Date: 8/6/2014 9:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.67	0.027	0.10	µg/L	1	8/8/2014 01:20 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 01:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-014

Client Sample ID: SA-MW-10D-059-Q3
Collection Date: 8/6/2014 10:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10	µg/L	1	8/8/2014 01:25 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 01:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-015

Client Sample ID: SA-MW-10S-059-Q3
Collection Date: 8/6/2014 11:31:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.5	0.027	0.10	µg/L	1	8/8/2014 01:31 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 01:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-017

Client Sample ID: EX-21-059-Q3
Collection Date: 8/6/2014 8:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.94	0.027	0.10	µg/L	1	8/8/2014 01:37 PM
Manganese	110	0.026	0.50	µg/L	1	8/8/2014 01:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-018

Client Sample ID: EX-22-059-Q3
Collection Date: 8/6/2014 8:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.62	0.027	0.10	µg/L	1	8/8/2014 01:42 PM
Manganese	96	0.026	0.50	µg/L	1	8/8/2014 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-019

Client Sample ID: MW-08-059-Q3
Collection Date: 8/6/2014 11:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	4.2	0.027	0.10	µg/L	1	8/8/2014 01:48 PM
Manganese	27	0.026	0.50	µg/L	1	8/8/2014 01:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-020

Client Sample ID: MW-09-059-Q3
Collection Date: 8/6/2014 10:11:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.4	0.027	0.10	µg/L	1	8/8/2014 01:53 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 01:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-021

Client Sample ID: MW-10-059-Q3
Collection Date: 8/6/2014 9:29:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.87	0.027	0.10	µg/L	1	8/8/2014 01:59 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 01:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-022

Client Sample ID: MW-908-059-Q3
Collection Date: 8/6/2014 9:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.82	0.027	0.10	µg/L	1	8/8/2014 02:14 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-023

Client Sample ID: MW-12A-059-Q3
Collection Date: 8/6/2014 11:03:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46278			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.52	0.027	0.10	µg/L	1	8/8/2014 02:20 PM
Manganese	690	0.26	5.0	µg/L	10	8/8/2014 09:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-024

Client Sample ID: MW-12B-059-Q3
Collection Date: 8/6/2014 3:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.42	0.027	0.10	µg/L	1	8/8/2014 02:36 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 02:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-025

Client Sample ID: MW-13-059-Q3
Collection Date: 8/6/2014 10:39:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.71	0.027	0.10	µg/L	1	8/8/2014 02:42 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 02:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-026

Client Sample ID: MW-14A-059-Q3
Collection Date: 8/6/2014 11:58:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.58	0.027	0.10	µg/L	1	8/8/2014 02:47 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-027

Client Sample ID: MW-14S-059-Q3
Collection Date: 8/6/2014 1:10:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.51	0.027	0.10	µg/L	1	8/8/2014 02:53 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 02:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-028

Client Sample ID: MW-18-059-Q3
Collection Date: 8/6/2014 2:01:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.9	0.027	0.10		µg/L	1	8/8/2014 02:58 PM
Manganese	ND	0.026	0.50		µg/L	1	8/8/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-030

Client Sample ID: SA-MW-01D-059-Q3
Collection Date: 8/6/2014 12:51:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	2.0	0.027	0.10	µg/L	1	8/8/2014 03:04 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 03:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-031

Client Sample ID: SA-MW-01S-059-Q3
Collection Date: 8/6/2014 1:34:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	0.76	0.027	0.10	µg/L	1	8/8/2014 03:20 PM
Manganese	6.4	0.026	0.50	µg/L	1	8/8/2014 03:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-032

Client Sample ID: SA-MW-02D-059-Q3
Collection Date: 8/6/2014 2:17:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	130	0.027	0.10	µg/L	1	8/8/2014 03:26 PM
Manganese	1800	0.64	12	µg/L	25	8/8/2014 09:36 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-033

Client Sample ID: SA-MW-02S-059-Q3
Collection Date: 8/6/2014 3:08:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	5.5	0.027	0.10	µg/L	1	8/8/2014 03:31 PM
Manganese	8.7	0.026	0.50	µg/L	1	8/8/2014 03:31 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-034

Client Sample ID: SA-MW-03D-059-Q3
Collection Date: 8/6/2014 10:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	100	0.027	0.10	µg/L	1	8/8/2014 03:37 PM
Manganese	2800	0.64	12	µg/L	25	8/8/2014 09:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-035

Client Sample ID: SA-MW-03S-059-Q3
Collection Date: 8/6/2014 9:05:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	97	0.027	0.10	µg/L	1	8/8/2014 03:42 PM
Manganese	2800	0.64	12	µg/L	25	8/8/2014 09:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-036

Client Sample ID: SA-MW-04D-059-Q3
Collection Date: 8/6/2014 10:57:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	5.9	0.027	0.10	µg/L	1	8/8/2014 03:48 PM
Manganese	160	0.026	0.50	µg/L	1	8/8/2014 03:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-037

Client Sample ID: MW-909-059-Q3
Collection Date: 8/6/2014 11:52:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279				PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10		µg/L	1	8/8/2014 03:53 PM
Manganese	ND	0.026	0.50		µg/L	1	8/8/2014 03:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-038

Client Sample ID: SA-MW-04S-059-Q3
Collection Date: 8/6/2014 11:51:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	1.1	0.027	0.10	µg/L	1	8/8/2014 03:59 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 20-Aug-14

CLIENT: CH2M HILL
Lab Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013132-039

Client Sample ID: SC-MW-08D-059-Q3
Collection Date: 8/6/2014 3:21:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46279			PrepDate	8/8/2014	Analyst: CEI
Arsenic	2.6	0.027	0.10	µg/L	1	8/8/2014 04:04 PM
Manganese	ND	0.026	0.50	µg/L	1	8/8/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46278	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478
Client ID: PBW	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821802
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46278	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478
Client ID: LCSW	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821803
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.513	0.10	10.00	0	105 85 115
Manganese	101.839	0.50	100.0	0	102 85 115

Sample ID N013132-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821855
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	16.070	0.10	10.00	5.611	105 75 125

Sample ID N013132-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821856
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	15.957	0.10	10.00	5.611	103 75 125 16.07 0.702 20

Sample ID N013132-013B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821857
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	11.039	0.10	10.00	0.6716	104 75 125
Manganese	97.094	0.50	100.0	0	97.1 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID N013132-001B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821889						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1658.618	12	100.0	1629	29.8	75	125				S

Sample ID N013132-001B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821890						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1669.095	12	100.0	1629	40.3	75	125	1659	0.630	20	S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46279	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: PBW	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	ND	0.10									
Manganese	0.043	0.50									

Sample ID LCS-46279	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: LCSW	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	10.472	0.10	10.00	0	105	85	115				
Manganese	104.264	0.50	100.0	0	104	85	115				

Sample ID N013132-024B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	11.037	0.10	10.00	0.4187	106	75	125				
Manganese	97.690	0.50	100.0	0	97.7	75	125				

Sample ID N013132-024B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821863						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	11.005	0.10	10.00	0.4187	106	75	125	11.04	0.284	20	
Manganese	97.482	0.50	100.0	0	97.5	75	125	97.69	0.213	20	

Sample ID N013132-035B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46279	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Arsenic	101.596	0.10	10.00	96.70	48.9	75	125				S
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID N013132-035B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94519						
Client ID: ZZZZZZ	Batch ID: 46279	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2691.069	12	100.0	2839	-148	75	125				S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2 SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28		500 ml Poly HNO3, 4°C Field		500 ml Poly HNO3, 4°C Field		500 ml Poly HNO3, 4°C Field		500 ml Poly HNO3, 4°C Field		1000ml Poly 4°C Field		1000ml Poly 4°C Field		1000ml Poly 4°C Field		1000ml Poly 4°C Field		1000ml Poly 4°C Field		3X40 ml VOA H2SO4, 4°C NA		2x1000 ml Poly HNO3 NA		Number of Containers COMMENTS	
				Cr(VI) (E218.6) FF		Metals Dissolved (6020AFF) FF As, Cr, Mn Metals Dissolved (6020AFF) FF As, Cr, Mn		Metals Dissolved (6020AFF) FF As, Mn		Uranium (E200.8FF) FF		Anions (E300.0) FF Cl,NO3N		Anions (E300.0) FF NO3N		Anions (E300.0) FF NO3N,SO4,Cl		Anions (E300.0) FF NO3N,SO4		Ortho-Phosphate (E300.0) FF		TDS (SM2540C)		TOC (E5310)		Gross Alpha/Beta (SM710B/E900)			
SAMPLE ID	DATE	TIME	Matrix																										
CA-MW-309-059-Q3	8/6/2014	0958	Water	X	X	X				X										X									
CA-MW-310D-059-Q3	8/6/2014	1045	Water	X	X	X				X										X									
CA-MW-310S-059-Q3	8/6/2014	1116	Water	X	X	X				X										X									
CA-MW-408-059-Q3	8/6/2014	1203	Water	X	X	X				X										X									
CA-MW-411D-059-Q3	8/6/2014	1319	Water	X	X	X				X										X									
CA-MW-411S-059-Q3	8/6/2014	1400	Water	X	X	X				X										X									
CA-MW-412D-059-Q3	8/6/2014	0908	Water	X	X	X				X										X									
MW-711-059-Q3	8/6/2014	1540	Water	X																									
MW-712-059-Q3	8/6/2014	1415	Water	X																									
SA-MW-05D-059-Q3	8/6/2014	1322	Water	X	X	X														X	X								
SA-MW-05S-059-Q3	8/6/2014	1234	Water	X	X	X														X	X								
SA-MW-06D-059-Q3	8/6/2014	0851	Water	X	X	X														X	X								
SA-MW-06S-059-Q3	8/6/2014	0921	Water	X	X	X														X	X								
SA-MW-10D-059-Q3	8/6/2014	1046	Water	X	X	X														X	X								
SA-MW-10S-059-Q3	8/6/2014	1131	Water	X	X	X														X	X								
MW-713-059-Q3	8/6/2014	0830	Water	X																									
EX-21-059-Q3	8/6/2014	0829	Water	X	X	X														X									

Signatures Approved by: <i>[Signature]</i> Sampled by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i> Relinquished by: <i>[Signature]</i> Received by: <i>[Signature]</i>		Date/Time 8-6-14 / 1640 8/6/14 1640 8/6/14 1640 8/6/14 1640 8/6/14 1927		Shipping Details Method of Shipment: On Ice: yes / no <i>S-7C/4.1-c</i> Airbill No: <i>IR#2</i> Lab Name: ASSET Laboratories Lab Phone: (702) 307-2659		ATTN:		Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001	
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container: 250 ml Poly Preservatives: (NH4)2SO4, NH4, OH, 4°C Filtered: Field Holding Time (days): 28	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	500 ml Poly HNO3, 4°C Field 180	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 2	1000ml Poly 4°C Field 7	3X40 ml VOA H2SO4, 4°C NA 28	2x1000 ml Poly HNO3 NA 180	Number of Containers	COMMENTS		
SAMPLE ID	DATE	TIME	Matrix	Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Mn FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Uranium (E200.8FF) FF	Anions (E300.0) FF Cl, NO3N	Anions (E300.0) FF NO3N	Anions (E300.0) FF NO3N, SO4 NO3N, SO4	Anions (E300.0) FF NO3N, SO4, Cl	Ortho-Phosphate (E300.0) FF	TDS (SM2540C)	TOC (E5310)	Gross Alpha/Beta (SM710B/E900)				
EX-22-059-Q3	8/6/2014	0857	Water	X	X	X					X						10/23/32-18	4	NT	
MW-08-059-Q3	8/6/2014	1130	Water	X	X	X				X								-19	4	NT
MW-09-059-Q3	8/6/2014	1011	Water	X	X	X				X								-20	3	NT
MW-10-059-Q3	8/6/2014	0929	Water	X	X	X				X								-21	4	NT
MW-908-059-Q3	8/6/2014	0939	Water	X	X	X				X								-22	4	NT
MW-12A-059-Q3	8/6/2014	1103	Water	X	X	X				X								-23	3	NT
MW-12B-059-Q3	8/6/2014	1517	Water	X	X	X				X								-24	3	NT
MW-13-059-Q3	8/6/2014	1039	Water	X	X	X				X								-25	4	NT
MW-14A-059-Q3	8/6/2014	1158	Water	X	X	X				X								-26	7	NT
MW-14S-059-Q3	8/6/2014	1310	Water	X	X	X		X		X								-27	9	NT
MW-18-059-Q3	8/6/2014	1401	Water	X	X		X			X								-28	3	NT
MW-714-059-Q3	8/6/2014	1109	Water	X														-29	1	PM
SA-MW-01D-059-Q3	8/6/2014	1251	Water	X	X	X						X	X					-30	6	PM
SA-MW-01S-059-Q3	8/6/2014	1334	Water	X	X	X						X	X					-31	6	PM
SA-MW-02D-059-Q3	8/6/2014	1417	Water	X	X	X						X	X					-32	6	PM
SA-MW-02S-059-Q3	8/6/2014	1508	Water	X	X	X						X	X					-33	6	PM
SA-MW-03D-059-Q3	8/6/2014	1001	Water	X	X	X						X	X					-34	6	PM

Approved by [Signature] Sampled by [Signature] Relinquished by [Signature] Received by [Signature] Relinquished by [Signature] Received by [Signature]	Signatures Date/Time 8/6/14 1640 8/6/14 1640 8/6/14 1640 8/6/14 1640 8/6/14 1927 8/6/14 1927	Shipping Details Method of Shipment: On Ice: <input checked="" type="checkbox"/> yes / no 3.6°C / 5.9°C / 5.1°C Airbill No: 1R2 Lab Name: ASSET Laboratories Lab Phone: (702) 307-2659	ATTN:	Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley				Container:	250 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	2x1000 ml Poly	Number of Containers	COMMENTS		
Location Hinkley				Preservatives:	(NH4)2, SO4, NH4, OH, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	4°C	4°C	H2SO4, 4°C	HNO3					
Project Number 492581.UR.IR.FW				Filtered:	Field	Field	Field	Field	Field	Field	Field	Field	Field	Field	Field	Field	Field				
Project Manager Jennifer Low				Holding Time (days):	28	180	180	180	180	2	2	2	2	2	7	28	180				
Sample Manager Jim Harvey					Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cr, Mn	Metals Dissolved (6020AFF) FF As, Mn	Uranium (E200.8FF) FF	Anions (E300.0) FF Cl, NO3N	Anions (E300.0) FF NO3N	Anions (E300.0) FF NO3N, SO4, Cl	Ortho-Phosphate (E300.0) FF	TDS (SM2540C)	TOC (E5310)	Gross Alpha/Beta (SM710B/E900)					
Cell Number (404) 229-2181																					
Fax Number (510) 622-9136																					
Task Order 59																					
Project 2014-COMPLIANCE-IRZ-059-Q3																					
Turnaround Time 10 Days																					
Shipping Date:																					
COC Number:																					
SAMPLE ID	DATE	TIME	Matrix																		
SA-MW-03S-059-Q3	8/6/2014	0905	Water	X	X	X						X	X		X				NO13132-35		
SA-MW-04D-059-Q3	8/6/2014	1057	Water	X	X	X						X	X		X				-36		
MW-909-059-Q3	8/6/2014	1152	Water	X	X	X						X	X		X				-37		
SA-MW-04S-059-Q3	8/6/2014	1151	Water	X	X	X						X	X		X				-38		
SC-MW-08D-059-Q3	8/6/2014	1521	Water	X	X	X			X			X		X	X				↓ -39		

TOTAL NUMBER OF CONTAINERS 194

<p>Approved by <i>[Signature]</i></p> <p>Sampled by <i>[Signature]</i></p> <p>Relinquished by <i>[Signature]</i></p> <p>Received by <i>[Signature]</i></p> <p>Relinquished by <i>[Signature]</i></p> <p>Received by <i>[Signature]</i></p>	<p>Signatures</p> <p>Date/Time</p> <p>8/6/14/1640</p> <p>8/6/14 1640</p> <p>8/6/14 1640</p> <p>8/6/14 1640</p> <p>8/6/14</p> <p>8/6/14/127</p>	<p>Shipping Details</p> <p>Method of Shipment:</p> <p>On Ice: <input checked="" type="checkbox"/> yes / no <i>40300 IRZ</i></p> <p>Airbill No:</p> <p>Lab Name: ASSET Laboratories</p> <p>Lab Phone: (702) 307-2659</p>	<p>ATTN:</p>	<p>Special Instructions:</p> <p>Report Copy to:</p> <p>Shawn Duffy</p> <p>(530) 941-9227</p> <p>2525 Airpark Drive, Redding, CA 96001</p>
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 8/6/2014 Workorder: N013132
 Rep sample Temp (Deg C): 3.7/4.1/3.6/3.9/3.1/4.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|--|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments Samples SA-MW-06D and SA-MW-04D were received at pH 3. Samples SA-MW-02D and SA-MW-03D were received at pH 4 and sample SA-MW-14A was received at pH 8. Acid added to all containers to pH<2.

Checklist Completed B

AC ACortez 8/7/2014

Reviewed By:

fgg 08/08/14



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

07-Aug-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 900.0		
N013132-027F / MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	32OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N13132A For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7707 8335 0769

Relinquished by: <u>ACortez</u> 8/7/2014	Date/Time 1500	Received by: _____	Date/Time
Relinquished by: _____	_____	Received by: _____	_____

SAMPLE CALCULATION

METHOD: SM 2540C

TEST NAME: Total Filterable Residue

MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying

B = weight of dish in g

C = volume of sample used in mL


For ^{017D} ~~N013132-001D~~, TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(64.0327-63.9901)*1000000}{100}$$

426 mg/L

Reporting result in two significant figures,

$$\text{TDS} = 430 \text{ mg/L}$$


8/8/2014

TOTAL DISSOLVED SOLIDS, TDS

$$\text{TDS, mg/L} = (A-B) \times 1000000 / C$$

WHERE:

A = weight in grams of dish + residue after drying

B = weight of dish in grams

C = volume of sample used in mL

Date Started: 8/7/2014								TDS/CONDUCTIVITY
Date Finished: 8/8/2014	vol	initial	final	calc	prep fact	TDS, mg/L	CONDUCTIVITY	RATIO
MB-46272	100	64.1082	64.1082	0	1	0.00		
LCS-46272	100	63.5107	63.6048	941	1	941.00		
N013132-017D	100	63.9901	64.0327	426	1	426.00	615	0.69
N013132-017D-DUP	100	63.9722	64.0137	415	1	415.00	615	0.67
N013132-018D	100	63.7996	63.8863	867	1	867.00	1222	0.71
N013132-019D	100	62.9923	63.0251	328	1	328.00	424	0.77
N013132-021D	100	64.2742	64.3701	959	1	959.00	1380	0.69
N013132-022D	100	61.3593	61.4566	973	1	973.00	1393	0.70
N013132-025D	100	63.7787	63.8772	985	1	985.00	1395	0.71
N013132-026D	100	60.9818	61.0773	955	1	955.00	1410	0.68
N013132-027D	100	61.0189	61.1437	1248	1	1248.00	1715	0.73

Jmer
8/8/2014

Sample Calculation

METHOD: EPA 200.8

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Uranium Radioactivity, in pCi/L, in the original sample as follows:

$$\text{Uranium, pCi/L} = A * DF * PF * 0.67 \text{ (pCi/ug)}$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL


0.67 = conversion factor

For Sample **N013132-027B**, the Uranium Radioactivity in pCi/L is calculated as follows:

$$\begin{aligned} \text{Uranium, pCi/L} &= 59.1690044320 * 1 * (25/25) * 0.67 \\ &= 39.6432329694 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Uranium, pCi/L} = 40$$

 8/20/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013132
Test Method: EPA 200.8
Analysis Date: 8/13/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46301

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013132-027B-DT 5X	Uranium	pCi/L	40.85366721	PASS	39.64323297	3.05%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 200.8DIS_U_PGE

Sample ID: N013132-027B-PS	SampType: PS	TestCode: 200.8DIS_U_	Units: pCi/L	Prep Date:	RunNo: 94531						
Client ID: ZZZZZ	Batch ID: 46301	TestNo: EPA 200.8	Analysis Date: 8/13/2014	SeqNo: 1823930							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium	46.745	0.67	6.700	39.64	106	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013132-029A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.016547 * 1 \\ &= 0.016547\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013132-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 7.4612 * 1 \\ &= 7.4612\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 7.5$$

 8/20/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Chloride concentration, in mg/L, in the original sample as follows:

$$\text{Chloride, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013132-039C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Chloride, mg/L} &= 2.354 * 50 \\ &= 117.7 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Chloride, mg/L} = 120$$

 8/20/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: ^{001D}
N013132-015D

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [\begin{matrix} 0.66 \\ \cancel{0.79260} \end{matrix}] [1] - 0.09650$$


$$\text{TOC} = \begin{matrix} 0.5635 \\ \cancel{0.69610} \end{matrix}$$

Reporting results in two significant figures,

$$\text{TOC} = \begin{matrix} 0.5635 \\ \cancel{0.69} \end{matrix} \text{ mg/L}$$

TOC = ND

PS 8/19/2014

 8/20/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013132-001B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.2365616159 * 1 * (25/25) \\ &= 0.2365616159 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = \mathbf{0.24}$$

 8/20/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013132
Test Method: EPA 6010
Analysis Date: 8/8/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46280

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013132-002B-DT 5X	Iron	mg/L	0	NA	0.002974544	100.00%	10

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013132
Test Method: EPA 6010
Analysis Date: 8/8/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46281

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments: _____ Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013132-025B-DT 5X	Iron	mg/L	0	NA	0		10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013132-002B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94482						
Client ID: ZZZZZ	Batch ID: 46280	TestNo: EPA 6010B EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1822079							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.790	0.020	2.500	0.002975	111	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID: N013132-025B-PS	SampType: PS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date:	RunNo: 94482						
Client ID: ZZZZZ	Batch ID: 46281	TestNo: EPA 6010B EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1822113							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.772	0.020	2.500	0	111	80	120				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013132-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 8.00215285495092 * 1 * (25/25) \\ &= 8.00215285495092 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 8.0$$

 8/20/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013132
Test Method: EPA 6020
Analysis Date: 8/8/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46278

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013132-001B-DT 5X	Chromium	µg/L	0.165375482	NA	0.141475418	16.89%	10
N013132-001B-DT 5X	Arsenic	µg/L	5.805006158	PASS	5.61073829	3.46%	10
N013132-001B-DT 125X	Manganese	µg/L	1655.010103	PASS	1628.822389	1.61%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013132
 Test Method: EPA 6020
 Analysis Date: 8/8/2014

Dilution Test Summary

Matrix: Water
 Batch No.: 46279

Instrument ID: ICP-MS #2
 Instrument Description: Agilent 7700x


Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr, Mn & As. The calculated values are <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
			13.11499		12.7425	2.92%	
N013132-024B-DT 5X	Chromium	µg/L	12.74251951	NA	13.11499765	2.64%	10
N013132-024B-DT 5X	Arsenic	µg/L	0.43294629	NA	0.418716105	3.40%	10
N013132-024B-DT 5X	Manganese	µg/L	0	NA	0		10

Note: NA - Not applicable

 8/20/2014
for

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013132-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/8/2014	SeqNo: 1821671						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.958	1.0	10.00	0.1415	98.2	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013132-024B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46279	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821676						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	22.653	1.0	10.00	12.74	99.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013132-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821854						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.848	0.10	10.00	5.611	102	80	120				

Sample ID: N013132-001B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46278	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821888						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1672.849	12	100.0	1629	44.0	80	120				S

DT @125x for Mn is within criteria

Nancy 8/20/2014

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N013132
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013132-024B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46279	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821859						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.119	0.10	10.00	0.4187	107	80	120				
Manganese	98.695	0.50	100.0	0	98.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

August 26, 2014

Mr. Marlon Cartin
ASSET Laboratories
3151-3153 W. Post Road
Las Vegas, NV 89118

RE: Project: N013132
Pace Project No.: 30127137

Dear Mr. Cartin:

Enclosed are the analytical results for sample(s) received by the laboratory on August 13, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jacquelyn Collins
jacquelyn.collins@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N013132
Pace Project No.: 30127137

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30127137001	MW-14S-059-Q3	Water	08/06/14 13:10	08/13/14 09:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N013132
Pace Project No.: 30127137

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30127137001	MW-14S-059-Q3	EPA 900.0	FCC	2

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: N013132

Pace Project No.: 30127137

Method: EPA 900.0

Description: 900.0 Gross Alpha/Beta

Client: ASSET Laboratories

Date: August 26, 2014

General Information:

1 sample was analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: N013132

Pace Project No.: 30127137

Sample: MW-14S-059-Q3 **Lab ID: 30127137001** Collected: 08/06/14 13:10 Received: 08/13/14 09:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	46.7 ± 10.3 (5.52) C:NA T:NA	pCi/L	08/18/14 19:18	12587-46-1	
Gross Beta	EPA 900.0	4.03 ± 1.75 (4.00) C:NA T:NA	pCi/L	08/18/14 19:18	12587-47-2	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: N013132

Pace Project No.: 30127137

QC Batch: RADC/20955

Analysis Method: EPA 900.0

QC Batch Method: EPA 900.0

Analysis Description: 900.0 Gross Alpha/Beta

Associated Lab Samples: 30127137001

METHOD BLANK: 773998

Matrix: Water

Associated Lab Samples: 30127137001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	1.54 ± 1.12 (1.98) C:NA T:NA	pCi/L	08/19/14 07:26	
Gross Beta	0.616 ± 0.838 (1.76) C:NA T:NA	pCi/L	08/19/14 07:26	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.asset-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV 30127137

Subcontractor:

Pace Analytical
1638 Roseytown Rd - Suite 2
Greensburg, PA 15601

TEL: 724.850.5600
FAX: 724.850.5601
Acct #:

Field Sampler: SIGNED

07-Aug-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 900.0	Requested Tests
N013132-027F / MW-14S-059-Q3	Water	8/6/2014 1:10:00 PM	320ZP	1	001

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#:N13132A For questions, call Marion at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Normal TAT.

Please analyze for Gross Alpha/Beta by EPA Method 900. CH2MHill samples. For questions, please contact Shawn Duffy at (530)941-9227.

FedEx#: 7707 8335 0769

Relinquished by:	Date/Time	Received by:	Date/Time
<i>Alton</i>	8/7/2014 1500	<i>Allysa B. Muchoney</i>	8/13/14 0930
Relinquished by:		Received by:	



Sample Condition Upon Receipt

ARC

Client Name: ATL

Project # 30127137

Courier: [x] Fed Ex [] UPS [] USPS [] Client [] Commercial [] Pace Other

Tracking #: 770783359769

Custody Seal on Cooler/Box Present: [] yes [x] no Seals intact: [] yes [x] no Biological Tissue is Frozen: Yes No

Packing Material: Bubble Wrap [x] Bubble Bags [] None [] Other: packing paper

Thermometer Used N/A Type of Ice: Wet Blue [x] None [] Samples on ice, cooling process has begun

Cooler Temp.: Observed Temp.: N/A °C Correction Factor: N/A °C Final Temp: N/A °C

Date and Initials of person examining contents: ARM 8/13/14

Temp should be above freezing to 6°C

Comments:

Table with 16 rows of inspection criteria and checkboxes. Includes items like 'Chain of Custody Present', 'Samples Arrived within Hold Time', and 'Containers Intact'. Includes handwritten notes like 'NT' and 'PHL2'.

Client Notification/ Resolution:

Field Data Required?

Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review:

Signature: [Handwritten Signature] Date: 8/14/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Quality Control Sample Performance Assessment

Analyt: FCC
Date: 8/19/2014
Worklist: 20955
Matrix: Water
Method: EPA 900.0
SOP: PGH-R-001
MB Sample ID: 773998



Sample Matrix Spike Control Assessment		Gross Alpha		Gross Beta	
Analyte:	Sample Collection Date:	Sample MS ID:	Sample MS ID:	Sample MS ID:	Sample MS ID:
Gross Alpha	8/17/2014	30127087002	30127087002	30127087002	30127087002
Gross Beta					
MS/MSD Decay Corrected Spike Conc. (pCi/L):		13-048GA		13-047GB	
Spike Volume Used in MS (mL):		0.10		0.10	
Spike Volume Used in MSD (mL):		0.2012		0.2012	
MS Aliquot (L, g, F):		32.108		42.017	
MSD Target Conc. (pCi/L, g, F):		1.133		2.553	
MS Spike uncertainty (calculated):		0.466		2.105	
Sample 1.96 Sigma Unc.:		0.636		0.681	
Sample Matrix Spike Result:		21.166		42.744	
Sample MS 1.96 Sigma Unc.:		6.403		8.313	
Sample Matrix Spike Duplicate Result:		64.41%		96.72%	
MS % Recovery:		MS Assessment:		MS Assessment:	
MS/MSD Upper % Recovery Limits:		MS/MSD Lower % Recovery Limits:		MS/MSD Relative Percent Difference:	
MS/MSD Lower % Recovery Limits:		MS/MSD Relative Percent Difference:		MS/MSD RPD/Assessment:	
MS/MSD Relative Percent Difference:		MS/MSD RPD/Assessment:		% RPD Limit:	
MS/MSD RPD/Assessment:		% RPD Limit:			

Method Blank Assessment		Gross Alpha		Gross Beta		
Analyte:	Activity	1.96 Sig Unc.	MDC	Critical Value	Flag	Assessment
Gross Alpha	1.5360	1.1220	1.9810	0.62700		
Gross Beta	0.6160	0.8380	1.7580	0.59400		

Laboratory Control Sample Assessment		Gross Alpha		Gross Beta	
Analyte:	Count Date:	Sample ID:	Sample ID:	Sample ID:	Sample ID:
Gross Alpha	8/19/14 7:26	13-048GA	13-047GB	13-047GB	13-047GB
Gross Beta					
Spike Concentration (pCi/L):		64.598		84.465	
Volume Used (mL):		0.050		0.050	
Aliquot Volume (L, g, F):		16.191		21.170	
Target Conc. (pCi/L, g, F):		1.286		1.286	
1.96 Sigma Unc.:		3.799		4.828	
Result (pCi/L, g, F):		15.655		23.136	
1.96 Sigma Unc.:		3.818		4.828	
% Recovery:		96.69%		105.88%	
Assessment:		Pass		Pass	
Upper % Recovery Limits:		121.00%		130.00%	
Lower % Recovery Limits:		69.00%		79.00%	
Duplicate Sample Assessment		Y		Y	

LCS/LCSD Y or N?		Gross Alpha		Gross Beta	
Analyte:	Sample ID:	Sample ID:	Sample ID:	Sample ID:	Sample ID:
Gross Alpha	LCS20955	LCS20955	LCS20955	LCS20955	LCS20955
Gross Beta					
Duplicate Sample ID:		15.6550		22.4110	
Sample Result (pCi/L, g, F):		3.8180		4.7120	
1.96 Sigma Unc.:		15.4780		23.1360	
Duplicate Sample 1.96 Sigma Unc.:		3.7990		4.8280	
Either results below MDC?		NO		NO	
Relative Percent Difference:		1.14%		3.18%	
Assessment:		Pass		Pass	
% RPD Limit:		34.00%		29.00%	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

→ α limit is 55.13%
Ostark

Ostark

August 11, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013138

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on August 07, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and Advanced Technology Laboratories - Las Vegas.



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

3151 W. Post Road, Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691
www.assetlaboratories.com

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013138

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Sample was received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



ASSET Laboratories

Date: 12-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013138
Contract No: 2014-GMP-061-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013138-001A	EX-36-061-M08	Groundwater	8/7/2014 3:00:00 PM	8/7/2014	8/11/2014
N013138-001B	EX-36-061-M08	Groundwater	8/7/2014 3:00:00 PM	8/7/2014	8/11/2014
N013138-002A	TANK-202-061-M08	Groundwater	8/7/2014 3:00:00 PM	8/7/2014	8/11/2014
N013138-002B	TANK-202-061-M08	Groundwater	8/7/2014 3:00:00 PM	8/7/2014	8/11/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 12-Aug-14

CLIENT: CH2M HILL
Lab Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013138-001

Client Sample ID: EX-36-061-M08
Collection Date: 8/7/2014 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
				EPA 218.6			
RunID: IC7_140808A	QC Batch: R94489		PrepDate:		Analyst: RB		
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	8/8/2014 02:22 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A				EPA 6020			
RunID: ICP7_140808A	QC Batch: 46284		PrepDate: 8/8/2014		Analyst: CEI		
Chromium	1.9	0.030	1.0		µg/L	1	8/8/2014 06:13 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 11-Aug-14

CLIENT: CH2M HILL
Lab Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW
Lab ID: N013138-002

Client Sample ID: TANK-202-061-M08
Collection Date: 8/7/2014 3:00:00 PM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	-----	------	-------	----	---------------

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808A	QC Batch: R94489				PrepDate		Analyst: RB
Hexavalent Chromium	1.6	0.016	0.20		µg/L	1	8/8/2014 02:42 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140808A	QC Batch: 46284				PrepDate	8/8/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	8/8/2014 06:40 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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 ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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www.assetlaboratories.com

CLIENT: CH2M HILL
Work Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94489	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489
Client ID: PBW	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822453	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-R94489	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489
Client ID: LCSW	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822454	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	4.921	0.20	5.000	0	98.4 90 110

Sample ID N013132-023ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822456	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			0.01750 0 20

Sample ID N013132-023A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822457	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	1.023	0.20	1.000	0.01750	101 90 110

Sample ID N013132-026A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489
Client ID: ZZZZZ	Batch ID: R94489	TestNo: EPA 218.6	Analysis Date: 8/8/2014	SeqNo: 1822459	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	9.390	0.20	5.000	4.472	98.4 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013132-026A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.402	0.20	5.000	4.472	98.6	90	110	9.390	0.132	20	

Sample ID N013132-029A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822462						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				

Sample ID N013138-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822478						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.720	0.20	5.000	1.631	102	90	110				

Sample ID N013138-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94489						
Client ID: ZZZZZZ	Batch ID: R94489	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822480						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.530	0.20	5.000	1.634	97.9	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46284	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: PBW	Batch ID: 46284	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821682						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46284	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: LCSW	Batch ID: 46284	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821683						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.501 1.0 10.00 0 105 85 115

Sample ID N013138-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46284	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821687						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.003 1.0 10.00 1.873 101 75 125

Sample ID N013138-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/8/2014	RunNo: 94478						
Client ID: ZZZZZ	Batch ID: 46284	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821688						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 12.109 1.0 10.00 1.873 102 75 125 12.00 0.883 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CH2MHILL

Project Name PGE Hinkley		Container: 250 ml Poly		500 ml Poly		Number of Containers	COMMENTS
Location Hinkley		Preservatives: (NH4)2SO4, NH4, OH, 4°C		HNO3, 4°C			
Project Number 492581.UR.SW.FW		Filtered: Field		Field			
Project Manager Jennifer Low		Holding Time (days): 28		180			
Sample Manager Jim Hanvey		Cr(VI) (E218.6) FF		Metals Dissolved (6020A-FF) FF Cr			
Cell Number (404) 229-2181							
Fax Number (510) 622-9136							
Task Order 59							
Project 2014-GMP-061-M08							
Turnaround Time 2 Days							
Shipping Date:							
COC Number:							
EX-236-061-M08	DATE	TIME	Matrix				
EX-236-061-M08	8/7/14	1500	GW	✓	✓		
TANK-202-061-M08	8/7/14	1500	GW	✓	✓		
NO13138-1 ↓ -2						2	
↓ -2						2	
TOTAL NUMBER OF CONTAINERS						4	

Approved by	<u>D. Kawan</u>	Date/Time	<u>8/7/14 0700</u>	Shipping Details	ATTN:	Special Instructions:
Sampled by	<u>D. Kawan</u>	Date/Time	<u>8/7/14 1500</u>	Method of Shipment:		
Relinquished by	<u>D. Kawan</u>	Date/Time	<u>8/7/14 15:30</u>	On Ice: <input checked="" type="radio"/> yes / no <u>3.5°C</u>		Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
Received by	<u>Pungalang</u>	Date/Time	<u>8/7/14 1545</u>	Airbill No: <u>1PA2</u>		
Relinquished by	<u>Pungalang</u>	Date/Time	<u>8/7/14 2100</u>	Lab Name: Advanced Technology Laboratories		
Received by	<u>Pungalang</u>	Date/Time	<u>8/7/14 2100</u>	Lab Phone: (702) 307-2659		

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 8/7/2014 Workorder: N013138
 Rep sample Temp (Deg C): 3.5 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC AlCortez 8/8/2014

Reviewed By:

fyg 08/08/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013138-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.6307 * 1 \\ &= 1.6307\end{aligned}$$

Reporting results in two significant figures,

$$\text{Cr}^{+6}, \text{mg/L} = 1.6$$

 8/11/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013138-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 1.87315533063853 * 1 * (25/25) \\ &= 1.87315533063853 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 1.9$$

 8/11/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013138
Test Method: EPA 6020
Analysis Date: 8/8/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46284

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS @ 2x passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013138-001B-DT 5X	Chromium	µg/L	1.8541386	NA	1.873155331	1.02%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013138
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013138-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94478						
Client ID: ZZZZZZ	Batch ID: 46284	TestNo: EPA 6020 EPA 3010A	Analysis Date: 8/8/2014	SeqNo: 1821686							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	11.985	1.0	10.00	1.873	101	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

August 21, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013139

RE: PGE Hinkley, 492581.UR.IR.FW

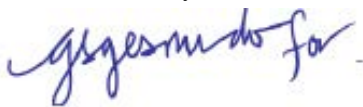
Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on August 07, 2014 by ASSET Laboratories . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139

CASE NARRATIVE**SAMPLE RECEIVING/GENERAL COMMENTS:**

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) on QC samples N013139-005C-MS, N013139-025C-MS, N013139-022C-MS and N013139-022C-MSD are outside recovery criteria for Orthophosphate, Dissolved (as P) possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (1.3 ug/L) and hexavalent chromium (0.0 ug/L) for sample N013139-004 (MW-911-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.457 and 1.302 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.312 ug/L) and hexavalent chromium (0.0 ug/L) for sample N013139-005 (SA-MW-22D-059-Q3) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.42 and 1.210 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike Duplicate (MSD) on QC sample N013139-024B-MSD is outside recovery criteria for Chromium possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



ASSET Laboratories

Date: 21-Aug-14

CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013139-001A	MW-715-059-Q3	Water	8/7/2014 3:15:00 PM	8/7/2014	8/21/2014
N013139-002A	SA-MW-21D-059-Q3	Water	8/7/2014 11:46:00 AM	8/7/2014	8/21/2014
N013139-002B	SA-MW-21D-059-Q3	Water	8/7/2014 11:46:00 AM	8/7/2014	8/21/2014
N013139-002C	SA-MW-21D-059-Q3	Water	8/7/2014 11:46:00 AM	8/7/2014	8/21/2014
N013139-002D	SA-MW-21D-059-Q3	Water	8/7/2014 11:46:00 AM	8/7/2014	8/21/2014
N013139-003A	SA-MW-21S-059-Q3	Water	8/7/2014 12:38:00 PM	8/7/2014	8/21/2014
N013139-003B	SA-MW-21S-059-Q3	Water	8/7/2014 12:38:00 PM	8/7/2014	8/21/2014
N013139-003C	SA-MW-21S-059-Q3	Water	8/7/2014 12:38:00 PM	8/7/2014	8/21/2014
N013139-003D	SA-MW-21S-059-Q3	Water	8/7/2014 12:38:00 PM	8/7/2014	8/21/2014
N013139-004A	MW-911-059-Q3	Water	8/7/2014 1:35:00 PM	8/7/2014	8/21/2014
N013139-004B	MW-911-059-Q3	Water	8/7/2014 1:35:00 PM	8/7/2014	8/21/2014
N013139-004C	MW-911-059-Q3	Water	8/7/2014 1:35:00 PM	8/7/2014	8/21/2014
N013139-004D	MW-911-059-Q3	Water	8/7/2014 1:35:00 PM	8/7/2014	8/21/2014
N013139-005A	SA-MW-22D-059-Q3	Water	8/7/2014 1:29:00 PM	8/7/2014	8/21/2014
N013139-005B	SA-MW-22D-059-Q3	Water	8/7/2014 1:29:00 PM	8/7/2014	8/21/2014
N013139-005C	SA-MW-22D-059-Q3	Water	8/7/2014 1:29:00 PM	8/7/2014	8/21/2014
N013139-005D	SA-MW-22D-059-Q3	Water	8/7/2014 1:29:00 PM	8/7/2014	8/21/2014
N013139-006A	SA-MW-22S-059-Q3	Water	8/7/2014 2:05:00 PM	8/7/2014	8/21/2014
N013139-006B	SA-MW-22S-059-Q3	Water	8/7/2014 2:05:00 PM	8/7/2014	8/21/2014
N013139-006C	SA-MW-22S-059-Q3	Water	8/7/2014 2:05:00 PM	8/7/2014	8/21/2014
N013139-006D	SA-MW-22S-059-Q3	Water	8/7/2014 2:05:00 PM	8/7/2014	8/21/2014
N013139-007A	SA-MW-24D-059-Q3	Water	8/7/2014 9:01:00 AM	8/7/2014	8/21/2014
N013139-007B	SA-MW-24D-059-Q3	Water	8/7/2014 9:01:00 AM	8/7/2014	8/21/2014
N013139-007C	SA-MW-24D-059-Q3	Water	8/7/2014 9:01:00 AM	8/7/2014	8/21/2014
N013139-007D	SA-MW-24D-059-Q3	Water	8/7/2014 9:01:00 AM	8/7/2014	8/21/2014
N013139-008A	SA-MW-24S-059-Q3	Water	8/7/2014 9:35:00 AM	8/7/2014	8/21/2014
N013139-008B	SA-MW-24S-059-Q3	Water	8/7/2014 9:35:00 AM	8/7/2014	8/21/2014
N013139-008C	SA-MW-24S-059-Q3	Water	8/7/2014 9:35:00 AM	8/7/2014	8/21/2014
N013139-008D	SA-MW-24S-059-Q3	Water	8/7/2014 9:35:00 AM	8/7/2014	8/21/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013139-009A	SA-MW-25D-059-Q3	Water	8/7/2014 10:22:00 AM	8/7/2014	8/21/2014
N013139-009B	SA-MW-25D-059-Q3	Water	8/7/2014 10:22:00 AM	8/7/2014	8/21/2014
N013139-009C	SA-MW-25D-059-Q3	Water	8/7/2014 10:22:00 AM	8/7/2014	8/21/2014
N013139-009D	SA-MW-25D-059-Q3	Water	8/7/2014 10:22:00 AM	8/7/2014	8/21/2014
N013139-010A	SA-MW-25S-059-Q3	Water	8/7/2014 10:54:00 AM	8/7/2014	8/21/2014
N013139-010B	SA-MW-25S-059-Q3	Water	8/7/2014 10:54:00 AM	8/7/2014	8/21/2014
N013139-010C	SA-MW-25S-059-Q3	Water	8/7/2014 10:54:00 AM	8/7/2014	8/21/2014
N013139-010D	SA-MW-25S-059-Q3	Water	8/7/2014 10:54:00 AM	8/7/2014	8/21/2014
N013139-011A	MW-716-059-Q3	Water	8/7/2014 8:30:00 AM	8/7/2014	8/21/2014
N013139-012A	MW-913-059-Q3	Water	8/7/2014 2:32:00 PM	8/7/2014	8/21/2014
N013139-012B	MW-913-059-Q3	Water	8/7/2014 2:32:00 PM	8/7/2014	8/21/2014
N013139-012C	MW-913-059-Q3	Water	8/7/2014 2:32:00 PM	8/7/2014	8/21/2014
N013139-012D	MW-913-059-Q3	Water	8/7/2014 2:32:00 PM	8/7/2014	8/21/2014
N013139-013A	SC-MW-05D-059-Q3	Water	8/7/2014 2:22:00 PM	8/7/2014	8/21/2014
N013139-013B	SC-MW-05D-059-Q3	Water	8/7/2014 2:22:00 PM	8/7/2014	8/21/2014
N013139-013C	SC-MW-05D-059-Q3	Water	8/7/2014 2:22:00 PM	8/7/2014	8/21/2014
N013139-013D	SC-MW-05D-059-Q3	Water	8/7/2014 2:22:00 PM	8/7/2014	8/21/2014
N013139-014A	SC-MW-05S-059-Q3	Water	8/7/2014 3:29:00 PM	8/7/2014	8/21/2014
N013139-014B	SC-MW-05S-059-Q3	Water	8/7/2014 3:29:00 PM	8/7/2014	8/21/2014
N013139-014C	SC-MW-05S-059-Q3	Water	8/7/2014 3:29:00 PM	8/7/2014	8/21/2014
N013139-014D	SC-MW-05S-059-Q3	Water	8/7/2014 3:29:00 PM	8/7/2014	8/21/2014
N013139-015A	SC-MW-06D-059-Q3	Water	8/7/2014 12:59:00 PM	8/7/2014	8/21/2014
N013139-015B	SC-MW-06D-059-Q3	Water	8/7/2014 12:59:00 PM	8/7/2014	8/21/2014
N013139-015C	SC-MW-06D-059-Q3	Water	8/7/2014 12:59:00 PM	8/7/2014	8/21/2014
N013139-015D	SC-MW-06D-059-Q3	Water	8/7/2014 12:59:00 PM	8/7/2014	8/21/2014
N013139-016A	SC-MW-06S-059-Q3	Water	8/7/2014 12:18:00 PM	8/7/2014	8/21/2014
N013139-016B	SC-MW-06S-059-Q3	Water	8/7/2014 12:18:00 PM	8/7/2014	8/21/2014
N013139-016C	SC-MW-06S-059-Q3	Water	8/7/2014 12:18:00 PM	8/7/2014	8/21/2014
N013139-016D	SC-MW-06S-059-Q3	Water	8/7/2014 12:18:00 PM	8/7/2014	8/21/2014
N013139-017A	SC-MW-07D-059-Q3	Water	8/7/2014 11:06:00 AM	8/7/2014	8/21/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013139-017B	SC-MW-07D-059-Q3	Water	8/7/2014 11:06:00 AM	8/7/2014	8/21/2014
N013139-017C	SC-MW-07D-059-Q3	Water	8/7/2014 11:06:00 AM	8/7/2014	8/21/2014
N013139-017D	SC-MW-07D-059-Q3	Water	8/7/2014 11:06:00 AM	8/7/2014	8/21/2014
N013139-018A	SC-MW-07S-059-Q3	Water	8/7/2014 10:21:00 AM	8/7/2014	8/21/2014
N013139-018B	SC-MW-07S-059-Q3	Water	8/7/2014 10:21:00 AM	8/7/2014	8/21/2014
N013139-018C	SC-MW-07S-059-Q3	Water	8/7/2014 10:21:00 AM	8/7/2014	8/21/2014
N013139-018D	SC-MW-07S-059-Q3	Water	8/7/2014 10:21:00 AM	8/7/2014	8/21/2014
N013139-019A	SC-MW-04S-059-Q3	Water	8/7/2014 11:16:00 AM	8/7/2014	8/21/2014
N013139-019B	SC-MW-04S-059-Q3	Water	8/7/2014 11:16:00 AM	8/7/2014	8/21/2014
N013139-019C	SC-MW-04S-059-Q3	Water	8/7/2014 11:16:00 AM	8/7/2014	8/21/2014
N013139-019D	SC-MW-04S-059-Q3	Water	8/7/2014 11:16:00 AM	8/7/2014	8/21/2014
N013139-020A	SC-MW-08S-059-Q3	Water	8/7/2014 9:07:00 AM	8/7/2014	8/21/2014
N013139-020B	SC-MW-08S-059-Q3	Water	8/7/2014 9:07:00 AM	8/7/2014	8/21/2014
N013139-020C	SC-MW-08S-059-Q3	Water	8/7/2014 9:07:00 AM	8/7/2014	8/21/2014
N013139-020D	SC-MW-08S-059-Q3	Water	8/7/2014 9:07:00 AM	8/7/2014	8/21/2014
N013139-021A	MW-717-059-Q3	Water	8/7/2014 9:15:00 AM	8/7/2014	8/21/2014
N013139-022A	SA-MW-16D-059-Q3	Water	8/7/2014 9:06:00 AM	8/7/2014	8/21/2014
N013139-022B	SA-MW-16D-059-Q3	Water	8/7/2014 9:06:00 AM	8/7/2014	8/21/2014
N013139-022C	SA-MW-16D-059-Q3	Water	8/7/2014 9:06:00 AM	8/7/2014	8/21/2014
N013139-022D	SA-MW-16D-059-Q3	Water	8/7/2014 9:06:00 AM	8/7/2014	8/21/2014
N013139-023A	MW-910-059-Q3	Water	8/7/2014 9:54:00 AM	8/7/2014	8/21/2014
N013139-023B	MW-910-059-Q3	Water	8/7/2014 9:54:00 AM	8/7/2014	8/21/2014
N013139-023C	MW-910-059-Q3	Water	8/7/2014 9:54:00 AM	8/7/2014	8/21/2014
N013139-023D	MW-910-059-Q3	Water	8/7/2014 9:54:00 AM	8/7/2014	8/21/2014
N013139-024A	SA-MW-16S-059-Q3	Water	8/7/2014 9:44:00 AM	8/7/2014	8/21/2014
N013139-024B	SA-MW-16S-059-Q3	Water	8/7/2014 9:44:00 AM	8/7/2014	8/21/2014
N013139-024C	SA-MW-16S-059-Q3	Water	8/7/2014 9:44:00 AM	8/7/2014	8/21/2014
N013139-024D	SA-MW-16S-059-Q3	Water	8/7/2014 9:44:00 AM	8/7/2014	8/21/2014
N013139-025A	SA-MW-17D-059-Q3	Water	8/7/2014 10:33:00 AM	8/7/2014	8/21/2014
N013139-025B	SA-MW-17D-059-Q3	Water	8/7/2014 10:33:00 AM	8/7/2014	8/21/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013139-025C	SA-MW-17D-059-Q3	Water	8/7/2014 10:33:00 AM	8/7/2014	8/21/2014
N013139-025D	SA-MW-17D-059-Q3	Water	8/7/2014 10:33:00 AM	8/7/2014	8/21/2014
N013139-026A	SA-MW-17S-059-Q3	Water	8/7/2014 11:21:00 AM	8/7/2014	8/21/2014
N013139-026B	SA-MW-17S-059-Q3	Water	8/7/2014 11:21:00 AM	8/7/2014	8/21/2014
N013139-026C	SA-MW-17S-059-Q3	Water	8/7/2014 11:21:00 AM	8/7/2014	8/21/2014
N013139-026D	SA-MW-17S-059-Q3	Water	8/7/2014 11:21:00 AM	8/7/2014	8/21/2014
N013139-027A	SA-MW-18D-059-Q3	Water	8/7/2014 12:03:00 PM	8/7/2014	8/21/2014
N013139-027B	SA-MW-18D-059-Q3	Water	8/7/2014 12:03:00 PM	8/7/2014	8/21/2014
N013139-027C	SA-MW-18D-059-Q3	Water	8/7/2014 12:03:00 PM	8/7/2014	8/21/2014
N013139-027D	SA-MW-18D-059-Q3	Water	8/7/2014 12:03:00 PM	8/7/2014	8/21/2014
N013139-028A	SA-MW-18S-059-Q3	Water	8/7/2014 12:57:00 PM	8/7/2014	8/21/2014
N013139-028B	SA-MW-18S-059-Q3	Water	8/7/2014 12:57:00 PM	8/7/2014	8/21/2014
N013139-028C	SA-MW-18S-059-Q3	Water	8/7/2014 12:57:00 PM	8/7/2014	8/21/2014
N013139-028D	SA-MW-18S-059-Q3	Water	8/7/2014 12:57:00 PM	8/7/2014	8/21/2014
N013139-029A	SA-MW-20D-059-Q3	Water	8/7/2014 2:03:00 PM	8/7/2014	8/21/2014
N013139-029B	SA-MW-20D-059-Q3	Water	8/7/2014 2:03:00 PM	8/7/2014	8/21/2014
N013139-029C	SA-MW-20D-059-Q3	Water	8/7/2014 2:03:00 PM	8/7/2014	8/21/2014
N013139-029D	SA-MW-20D-059-Q3	Water	8/7/2014 2:03:00 PM	8/7/2014	8/21/2014
N013139-030A	SA-MW-20S-059-Q3	Water	8/7/2014 3:06:00 PM	8/7/2014	8/21/2014
N013139-030B	SA-MW-20S-059-Q3	Water	8/7/2014 3:06:00 PM	8/7/2014	8/21/2014
N013139-030C	SA-MW-20S-059-Q3	Water	8/7/2014 3:06:00 PM	8/7/2014	8/21/2014
N013139-030D	SA-MW-20S-059-Q3	Water	8/7/2014 3:06:00 PM	8/7/2014	8/21/2014
N013139-031A	MW-718-059-Q3	Water	8/7/2014 10:23:00 AM	8/7/2014	8/21/2014
N013139-032A	SC-MW-01D-059-Q3	Water	8/7/2014 10:10:00 AM	8/7/2014	8/21/2014
N013139-032B	SC-MW-01D-059-Q3	Water	8/7/2014 10:10:00 AM	8/7/2014	8/21/2014
N013139-032C	SC-MW-01D-059-Q3	Water	8/7/2014 10:10:00 AM	8/7/2014	8/21/2014
N013139-032D	SC-MW-01D-059-Q3	Water	8/7/2014 10:10:00 AM	8/7/2014	8/21/2014
N013139-033A	SC-MW-01S-059-Q3	Water	8/7/2014 9:08:00 AM	8/7/2014	8/21/2014
N013139-033B	SC-MW-01S-059-Q3	Water	8/7/2014 9:08:00 AM	8/7/2014	8/21/2014
N013139-033C	SC-MW-01S-059-Q3	Water	8/7/2014 9:08:00 AM	8/7/2014	8/21/2014



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.IR.FW
Lab Order: N013139
Contract No: 2014-COMPLIA

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013139-033D	SC-MW-01S-059-Q3	Water	8/7/2014 9:08:00 AM	8/7/2014	8/21/2014
N013139-034A	SC-MW-02D-059-Q3	Water	8/7/2014 1:42:00 PM	8/7/2014	8/21/2014
N013139-034B	SC-MW-02D-059-Q3	Water	8/7/2014 1:42:00 PM	8/7/2014	8/21/2014
N013139-034C	SC-MW-02D-059-Q3	Water	8/7/2014 1:42:00 PM	8/7/2014	8/21/2014
N013139-034D	SC-MW-02D-059-Q3	Water	8/7/2014 1:42:00 PM	8/7/2014	8/21/2014
N013139-035A	SC-MW-02S-059-Q3	Water	8/7/2014 12:56:00 PM	8/7/2014	8/21/2014
N013139-035B	SC-MW-02S-059-Q3	Water	8/7/2014 12:56:00 PM	8/7/2014	8/21/2014
N013139-035C	SC-MW-02S-059-Q3	Water	8/7/2014 12:56:00 PM	8/7/2014	8/21/2014
N013139-035D	SC-MW-02S-059-Q3	Water	8/7/2014 12:56:00 PM	8/7/2014	8/21/2014
N013139-036A	SC-MW-03D-059-Q3	Water	8/7/2014 3:56:00 PM	8/7/2014	8/21/2014
N013139-036B	SC-MW-03D-059-Q3	Water	8/7/2014 3:56:00 PM	8/7/2014	8/21/2014
N013139-036C	SC-MW-03D-059-Q3	Water	8/7/2014 3:56:00 PM	8/7/2014	8/21/2014
N013139-036D	SC-MW-03D-059-Q3	Water	8/7/2014 3:56:00 PM	8/7/2014	8/21/2014
N013139-037A	SC-MW-03S-059-Q3	Water	8/7/2014 3:04:00 PM	8/7/2014	8/21/2014
N013139-037B	SC-MW-03S-059-Q3	Water	8/7/2014 3:04:00 PM	8/7/2014	8/21/2014
N013139-037C	SC-MW-03S-059-Q3	Water	8/7/2014 3:04:00 PM	8/7/2014	8/21/2014
N013139-037D	SC-MW-03S-059-Q3	Water	8/7/2014 3:04:00 PM	8/7/2014	8/21/2014
N013139-038A	SC-MW-04D-059-Q3	Water	8/7/2014 12:02:00 PM	8/7/2014	8/21/2014
N013139-038B	SC-MW-04D-059-Q3	Water	8/7/2014 12:02:00 PM	8/7/2014	8/21/2014
N013139-038C	SC-MW-04D-059-Q3	Water	8/7/2014 12:02:00 PM	8/7/2014	8/21/2014
N013139-038D	SC-MW-04D-059-Q3	Water	8/7/2014 12:02:00 PM	8/7/2014	8/21/2014



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-001

Client Sample ID: MW-715-059-Q3
Collection Date: 8/7/2014 3:15:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 04:15 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 07:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-002

Client Sample ID: SA-MW-21D-059-Q3
Collection Date: 8/7/2014 11:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	19	0.032	0.40		µg/L	2	8/11/2014 04:53 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	23	0.030	1.0		µg/L	1	8/11/2014 12:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-003

Client Sample ID: SA-MW-21S-059-Q3
Collection Date: 8/7/2014 12:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	11	0.016	0.20		µg/L	1	8/8/2014 08:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	10	0.030	1.0		µg/L	1	8/11/2014 12:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-004

Client Sample ID: MW-911-059-Q3
Collection Date: 8/7/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 04:36 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/11/2014 05:21 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	8/11/2014 01:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-005

Client Sample ID: SA-MW-22D-059-Q3
Collection Date: 8/7/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 09:14 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	8/11/2014 01:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-006

Client Sample ID: SA-MW-22S-059-Q3
Collection Date: 8/7/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/11/2014 01:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 01:20 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-007

Client Sample ID: SA-MW-24D-059-Q3
Collection Date: 8/7/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	20	0.080	1.0		µg/L	5	8/11/2014 03:09 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	20	0.030	1.0		µg/L	1	8/11/2014 01:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-008

Client Sample ID: SA-MW-24S-059-Q3
Collection Date: 8/7/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	33	0.080	1.0		µg/L	5	8/11/2014 03:18 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	33	0.030	1.0		µg/L	1	8/11/2014 01:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-009

Client Sample ID: SA-MW-25D-059-Q3
Collection Date: 8/7/2014 10:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	0.85	0.016	0.20		µg/L	1	8/8/2014 09:34 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 01:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-010

Client Sample ID: SA-MW-25S-059-Q3
Collection Date: 8/7/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC6_140808B	QC Batch: R94493				PrepDate		Analyst: RB
Hexavalent Chromium	0.82	0.016	0.20		µg/L	1	8/8/2014 09:54 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.0	0.030	1.0		µg/L	1	8/11/2014 01:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-011

Client Sample ID: MW-716-059-Q3
Collection Date: 8/7/2014 8:30:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 05:31 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 05:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-012

Client Sample ID: MW-913-059-Q3
Collection Date: 8/7/2014 2:32:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.92	0.016	0.20		µg/L	1	8/8/2014 06:27 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	8/11/2014 01:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-013

Client Sample ID: SC-MW-05D-059-Q3
Collection Date: 8/7/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.95	0.016	0.20		µg/L	1	8/8/2014 06:55 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.3	0.030	1.0		µg/L	1	8/11/2014 02:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-014

Client Sample ID: SC-MW-05S-059-Q3
Collection Date: 8/7/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.74	0.016	0.20		µg/L	1	8/8/2014 07:33 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	8/11/2014 02:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-015

Client Sample ID: SC-MW-06D-059-Q3
Collection Date: 8/7/2014 12:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	8/8/2014 07:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	8/11/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-016

Client Sample ID: SC-MW-06S-059-Q3
Collection Date: 8/7/2014 12:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.79	0.016	0.20		µg/L	1	8/8/2014 08:11 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.1	0.030	1.0		µg/L	1	8/11/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-017

Client Sample ID: SC-MW-07D-059-Q3
Collection Date: 8/7/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	1.1	0.016	0.20		µg/L	1	8/8/2014 08:30 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.4	0.030	1.0		µg/L	1	8/11/2014 02:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-018

Client Sample ID: SC-MW-07S-059-Q3
Collection Date: 8/7/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	8/8/2014 08:49 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.7	0.030	1.0		µg/L	1	8/11/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-019

Client Sample ID: SC-MW-04S-059-Q3
Collection Date: 8/7/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.66	0.016	0.20		µg/L	1	8/8/2014 09:26 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-020

Client Sample ID: SC-MW-08S-059-Q3
Collection Date: 8/7/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	1.8	0.016	0.20		µg/L	1	8/8/2014 09:45 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	2.1	0.030	1.0		µg/L	1	8/11/2014 02:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-021

Client Sample ID: MW-717-059-Q3
Collection Date: 8/7/2014 9:15:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 05:52 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 10:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-022

Client Sample ID: SA-MW-16D-059-Q3
Collection Date: 8/7/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.83	0.016	0.20		µg/L	1	8/8/2014 10:23 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-023

Client Sample ID: MW-910-059-Q3
Collection Date: 8/7/2014 9:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	340	0.80	10		µg/L	50	8/11/2014 03:28 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Chromium	370	0.15	5.0		µg/L	5	8/11/2014 08:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-024

Client Sample ID: SA-MW-16S-059-Q3
Collection Date: 8/7/2014 9:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	340	0.80	10		µg/L	50	8/11/2014 03:37 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140812A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	390	0.15	5.0		µg/L	5	8/12/2014 01:50 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-025

Client Sample ID: SA-MW-17D-059-Q3
Collection Date: 8/7/2014 10:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.78	0.016	0.20		µg/L	1	8/8/2014 11:20 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 04:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-026

Client Sample ID: SA-MW-17S-059-Q3
Collection Date: 8/7/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	190	0.80	10		µg/L	50	8/11/2014 03:47 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140812A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	210	0.15	5.0		µg/L	5	8/12/2014 02:18 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-027

Client Sample ID: SA-MW-18D-059-Q3
Collection Date: 8/7/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	64	0.16	2.0		µg/L	10	8/11/2014 03:56 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	69	0.030	1.0		µg/L	1	8/11/2014 04:15 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-028

Client Sample ID: SA-MW-18S-059-Q3
Collection Date: 8/7/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515						Analyst: RB
Hexavalent Chromium	350	0.80	10		µg/L	50	8/11/2014 04:05 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140812A	QC Batch: 46286					8/11/2014	Analyst: CEI
Chromium	390	0.15	5.0		µg/L	5	8/12/2014 02:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-029

Client Sample ID: SA-MW-20D-059-Q3
Collection Date: 8/7/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	830	1.6	20		µg/L	100	8/11/2014 04:15 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140812A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	910	0.30	10		µg/L	10	8/12/2014 02:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-030

Client Sample ID: SA-MW-20S-059-Q3
Collection Date: 8/7/2014 3:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	46	0.32	4.0		µg/L	20	8/11/2014 04:24 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	50	0.030	1.0		µg/L	1	8/11/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-031

Client Sample ID: MW-718-059-Q3
Collection Date: 8/7/2014 10:23:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC (LOW LEVEL)

EPA 218.6

RunID: IC1_140812A	QC Batch: R94527				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.012	0.060		µg/L	1	8/12/2014 06:13 PM

HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	ND	0.016	0.20		µg/L	1	8/8/2014 11:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-032

Client Sample ID: SC-MW-01D-059-Q3
Collection Date: 8/7/2014 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.96	0.016	0.20		µg/L	1	8/8/2014 11:58 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.2	0.030	1.0		µg/L	1	8/11/2014 04:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-033

Client Sample ID: SC-MW-01S-059-Q3
Collection Date: 8/7/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.57	0.016	0.20		µg/L	1	8/9/2014 12:17 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 04:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-034

Client Sample ID: SC-MW-02D-059-Q3
Collection Date: 8/7/2014 1:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	150	0.32	4.0		µg/L	20	8/11/2014 05:40 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	160	0.030	1.0		µg/L	1	8/11/2014 04:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-035

Client Sample ID: SC-MW-02S-059-Q3
Collection Date: 8/7/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140808B	QC Batch: R94490				PrepDate		Analyst: RB
Hexavalent Chromium	0.69	0.016	0.20		µg/L	1	8/9/2014 12:36 AM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	ND	0.030	1.0		µg/L	1	8/11/2014 05:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-036

Client Sample ID: SC-MW-03D-059-Q3
Collection Date: 8/7/2014 3:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	320	0.80	10		µg/L	50	8/11/2014 05:12 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140812A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	350	0.15	5.0		µg/L	5	8/12/2014 02:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-037

Client Sample ID: SC-MW-03S-059-Q3
Collection Date: 8/7/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	1.5	0.016	0.20		µg/L	1	8/11/2014 01:51 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	1.8	0.030	1.0		µg/L	1	8/11/2014 05:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-038

Client Sample ID: SC-MW-04D-059-Q3
Collection Date: 8/7/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140811A	QC Batch: R94515				PrepDate		Analyst: RB
Hexavalent Chromium	3.0	0.016	0.20		µg/L	1	8/11/2014 02:19 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Chromium	3.2	0.030	1.0		µg/L	1	8/11/2014 05:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID MB-R94527	SampType: MBLK	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527
Client ID: PBW	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823811
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.060			

Sample ID LCS-R94527	SampType: LCS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527
Client ID: LCSW	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823812
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.209	0.060	0.2000	0	104 90 110

Sample ID N013132-008ADUP	SampType: DUP	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823814
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.020	0.060			0.01277 0 20

Sample ID N013132-008AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823815
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.200	0.060	0.2000	0.01277	93.5 90 110

Sample ID N013132-009AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527
Client ID: ZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823817
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01326	100 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013132-009AMSD	SampType: MSD	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823818						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.218	0.060	0.2000	0.01326	102	90	110	0.2137	2.00	20	

Sample ID N013132-016AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823820						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.214	0.060	0.2000	0.01675	98.4	90	110				

Sample ID N013132-019AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823824						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.230	0.060	0.2000	0.04077	94.5	90	110				

Sample ID N013132-023AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823826						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.02312	96.3	90	110				

Sample ID N013132-029AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823828						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.01655	101	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013139-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823830						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01366	101	90	110				

Sample ID N013139-004AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823832						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.197	0.060	0.2000	0	98.7	90	110				

Sample ID N013139-011AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823836						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01876	97.2	90	110				

Sample ID N013139-021AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823838						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.060	0.2000	0.02447	97.5	90	110				

Sample ID N013139-031AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823840						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.207	0.060	0.2000	0.02613	90.6	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_W_LLPGE

Sample ID N013142-001AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823842						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.060	0.2000	0.01268	95.0	90	110				

Sample ID N013142-012AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823844						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.209	0.060	0.2000	0.01360	97.5	90	110				

Sample ID N013142-013AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823848						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.216	0.060	0.2000	0.01665	99.5	90	110				

Sample ID N013142-014AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823850						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.210	0.060	0.2000	0.01450	97.7	90	110				

Sample ID N013108-022AMS	SampType: MS	TestCode: 218.6_W_LL	Units: µg/L	Prep Date:	RunNo: 94527						
Client ID: ZZZZZZ	Batch ID: R94527	TestNo: EPA 218.6		Analysis Date: 8/12/2014	SeqNo: 1823852						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.213	0.060	0.2000	0.01964	96.5	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-012A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822511						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.937	0.20	1.000	0.9212	102	90	110	1.882	2.85	20	

Sample ID N013139-013A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822513						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.942	0.20	1.000	0.9536	98.8	90	110				

Sample ID N013139-014A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822517						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.715	0.20	1.000	0.7398	97.6	90	110				

Sample ID N013139-015A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822519						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.106	0.20	1.000	1.100	101	90	110				

Sample ID N013139-016A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822521						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.814	0.20	1.000	0.7916	102	90	110				

Qualifiers:

- | | | |
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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-017A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.126	0.20	1.000	1.105	102	90	110				

Sample ID N013139-018A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.416	0.20	1.000	1.452	96.4	90	110				

Sample ID N013139-019A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.687	0.20	1.000	0.6592	103	90	110				

Sample ID N013139-020A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822531						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.743	0.20	1.000	1.812	93.0	90	110				

Sample ID N013139-021A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.026	0.20	1.000	0	103	90	110				

Qualifiers:

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| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-022A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822535						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.872	0.20	1.000	0.8327	104	90	110				
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Sample ID N013139-025A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822539						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.825	0.20	1.000	0.7792	105	90	110				
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Sample ID N013139-031A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822541						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.013	0.20	1.000	0	101	90	110				
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Sample ID N013139-032A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/9/2014	SeqNo: 1822543						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.963	0.20	1.000	0.9600	100	90	110				
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Sample ID N013139-033A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/9/2014	SeqNo: 1822545						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.559	0.20	1.000	0.5668	99.2	90	110				
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-035A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94490						
Client ID: ZZZZZZ	Batch ID: R94490	TestNo: EPA 218.6		Analysis Date: 8/9/2014	SeqNo: 1822547						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.751	0.20	1.000	0.6947	106	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94493	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: PBW	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822611						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID LCS-R94493	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: LCSW	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822612						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	5.009	0.20	5.000	0	100	90	110				
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Sample ID N013139-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822616						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID N013139-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822617						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				
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Sample ID N013139-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822618						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110	1.074	5.31	20	
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Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822623						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	15.597	0.20	5.000	10.59	100	90	110				

Sample ID N013139-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822625						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0	102	90	110				

Sample ID N013139-009A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822627						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.839	0.20	1.000	0.8476	99.2	90	110				

Sample ID N013139-010A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94493						
Client ID: ZZZZZZ	Batch ID: R94493	TestNo: EPA 218.6		Analysis Date: 8/8/2014	SeqNo: 1822629						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.857	0.20	1.000	0.8210	104	90	110				

Qualifiers:

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|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: MB-R94515	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: PBW	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823142						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20									
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Sample ID: LCS-R94515	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: LCSW	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823143						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	4.960	0.20	5.000	0	99.2	90	110				
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Sample ID: N013139-006ADUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823145						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	ND	0.20						0	0	20	
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Sample ID: N013139-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823146						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	0.997	0.20	1.000	0	99.7	90	110				
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Sample ID: N013139-037A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823148						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexavalent Chromium	2.581	0.20	1.000	1.532	105	90	110				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013139-037A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823149						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.543	0.20	1.000	1.532	101	90	110	2.581	1.48	20	

Sample ID N013139-038A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823151						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.084	0.20	5.000	2.969	102	90	110				

Sample ID N013139-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94515						
Client ID: ZZZZZZ	Batch ID: R94515	TestNo: EPA 218.6		Analysis Date: 8/11/2014	SeqNo: 1823168						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46285	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: PBW	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823329						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46285	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: LCSW	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823330						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.189	1.0	10.00	0	102	85	115				
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Sample ID N013139-002B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823357						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	32.068	1.0	10.00	23.08	89.8	75	125				
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Sample ID N013139-002B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823358						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	31.785	1.0	10.00	23.08	87.0	75	125	32.07	0.887	20	
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Sample ID N013139-013B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	11.011	1.0	10.00	1.282	97.3	75	125				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46286	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: PBW	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	ND	1.0									
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Sample ID LCS-46286	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: LCSW	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.285	1.0	10.00	0	103	85	115				
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Sample ID N013139-035B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823384						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	10.951	1.0	10.00	0.9169	100	75	125				
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Sample ID N013139-024B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94523						
Client ID: ZZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823596						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	398.900	5.0	10.00	389.7	92.0	75	125				
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Sample ID N013139-024B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94523						
Client ID: ZZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823597						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium	380.352	5.0	10.00	389.7	-93.5	75	125	398.9	4.76	20	S
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-002

Client Sample ID: SA-MW-21D-059-Q3
Collection Date: 8/7/2014 11:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	67	0.50	10		mg/L	20	8/12/2014 11:10 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 03:29 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	110	0.66	10		mg/L	20	8/12/2014 11:10 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	0.54	0.0051	0.050		mg/L	1	8/8/2014 03:29 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-21S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 12:38:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	69	0.50	10		mg/L	20	8/12/2014 11:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:05 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	93	0.66	10		mg/L	20	8/12/2014 11:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	5.2	0.051	0.50		mg/L	10	8/9/2014 01:05 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-004

Client Sample ID: MW-911-059-Q3
Collection Date: 8/7/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	62	0.50	10		mg/L	20	8/12/2014 11:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:17 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	81	0.66	10		mg/L	20	8/12/2014 11:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/8/2014 09:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-005

Client Sample ID: SA-MW-22D-059-Q3
Collection Date: 8/7/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Chloride	63	0.50	10		mg/L	20	8/12/2014 11:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:30 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140812B	QC Batch: R94521				PrepDate		Analyst: PS
Sulfate	82	0.66	10		mg/L	20	8/12/2014 11:47 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/8/2014 09:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-006

Client Sample ID: SA-MW-22S-059-Q3
Collection Date: 8/7/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	66	0.50	10		mg/L	20	8/13/2014 10:17 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:42 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	60	0.66	10		mg/L	20	8/13/2014 10:17 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	ND	0.0051	0.050		mg/L	1	8/8/2014 09:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-007

Client Sample ID: SA-MW-24D-059-Q3
Collection Date: 8/7/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	31	0.50	10		mg/L	20	8/13/2014 10:30 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:51 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	61	0.66	10		mg/L	20	8/13/2014 10:30 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	1.2	0.0051	0.050		mg/L	1	8/8/2014 09:51 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-008

Client Sample ID: SA-MW-24S-059-Q3
Collection Date: 8/7/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	84	0.50	10		mg/L	20	8/13/2014 10:43 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:03 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	110	0.66	10		mg/L	20	8/13/2014 10:43 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	7.9	0.051	0.50		mg/L	10	8/8/2014 12:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-25D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:22:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-009	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	48	0.50	10		mg/L	20	8/13/2014 10:55 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:16 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	69	0.66	10		mg/L	20	8/13/2014 10:55 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	7.1	0.051	0.50		mg/L	10	8/8/2014 11:57 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-010

Client Sample ID: SA-MW-25S-059-Q3
Collection Date: 8/7/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	86	1.2	25		mg/L	50	8/13/2014 11:08 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:29 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	120	1.6	25		mg/L	50	8/13/2014 11:08 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	15	0.10	1.0		mg/L	20	8/8/2014 01:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-012

Client Sample ID: MW-913-059-Q3
Collection Date: 8/7/2014 2:32:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	82	0.50	10		mg/L	20	8/13/2014 11:20 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 09:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	9.8	0.051	0.50		mg/L	10	8/9/2014 01:55 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-013

Client Sample ID: SC-MW-05D-059-Q3
Collection Date: 8/7/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	82	0.50	10		mg/L	20	8/13/2014 11:33 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	9.8	0.051	0.50		mg/L	10	8/9/2014 02:08 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-014

Client Sample ID: SC-MW-05S-059-Q3
Collection Date: 8/7/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	65	0.50	10		mg/L	20	8/13/2014 11:46 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:20 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	6.4	0.026	0.25		mg/L	5	8/9/2014 02:20 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-015

Client Sample ID: SC-MW-06D-059-Q3
Collection Date: 8/7/2014 12:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	89	0.50	10		mg/L	20	8/13/2014 12:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:33 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	11	0.051	0.50		mg/L	10	8/9/2014 02:33 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-016

Client Sample ID: SC-MW-06S-059-Q3
Collection Date: 8/7/2014 12:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	66	0.50	10		mg/L	20	8/13/2014 12:36 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/9/2014 12:52 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	6.2	0.051	0.50		mg/L	10	8/9/2014 02:46 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-017

Client Sample ID: SC-MW-07D-059-Q3
Collection Date: 8/7/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	110	0.50	10		mg/L	20	8/13/2014 12:49 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 03:54 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	14	0.051	0.50		mg/L	10	8/8/2014 04:45 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-018

Client Sample ID: SC-MW-07S-059-Q3
Collection Date: 8/7/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	100	1.2	25		mg/L	50	8/13/2014 01:02 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:41 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	16	0.10	1.0		mg/L	20	8/8/2014 01:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-019

Client Sample ID: SC-MW-04S-059-Q3
Collection Date: 8/7/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	69	1.2	25		mg/L	50	8/13/2014 01:14 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 03:41 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	7.7	0.051	0.50		mg/L	10	8/8/2014 04:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-020

Client Sample ID: SC-MW-08S-059-Q3
Collection Date: 8/7/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	130	1.2	25		mg/L	50	8/13/2014 01:27 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 10:54 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	17	0.10	1.0		mg/L	20	8/8/2014 01:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-022

Client Sample ID: SA-MW-16D-059-Q3
Collection Date: 8/7/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	40	0.50	10		mg/L	20	8/13/2014 01:39 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:07 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	84	0.66	10		mg/L	20	8/13/2014 01:39 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	0.31	0.0051	0.050		mg/L	1	8/8/2014 11:07 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-023

Client Sample ID: MW-910-059-Q3
Collection Date: 8/7/2014 9:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	60	0.50	10		mg/L	20	8/13/2014 01:52 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:19 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	81	0.66	10		mg/L	20	8/13/2014 01:52 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	8/8/2014 11:19 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-024

Client Sample ID: SA-MW-16S-059-Q3
Collection Date: 8/7/2014 9:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	59	0.50	10		mg/L	20	8/13/2014 02:05 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 12:22 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	83	0.66	10		mg/L	20	8/13/2014 02:05 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	1.6	0.0051	0.050		mg/L	1	8/8/2014 12:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-17D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-025	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532	PrepDate	Analyst: PS
Chloride	28 0.50	10	mg/L 20 8/13/2014 04:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480	PrepDate	Analyst: PS
Orthophosphate, Dissolved (as P)	ND 0.027	0.10	mg/L 1 8/8/2014 12:35 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532	PrepDate	Analyst: PS
Sulfate	59 0.66	10	mg/L 20 8/13/2014 04:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480	PrepDate	Analyst: PS
Nitrate as N	0.28 0.0051	0.050	mg/L 1 8/8/2014 12:35 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-026

Client Sample ID: SA-MW-17S-059-Q3
Collection Date: 8/7/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	58	0.50	10		mg/L	20	8/13/2014 02:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 04:19 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	130	0.66	10		mg/L	20	8/13/2014 02:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	2.1	0.0051	0.050		mg/L	1	8/8/2014 04:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-027

Client Sample ID: SA-MW-18D-059-Q3
Collection Date: 8/7/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Chloride	35	0.50	10		mg/L	20	8/13/2014 03:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 04:07 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813A	QC Batch: R94532				PrepDate		Analyst: PS
Sulfate	54	0.66	10		mg/L	20	8/13/2014 03:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	0.84	0.0051	0.050		mg/L	1	8/8/2014 04:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-028

Client Sample ID: SA-MW-18S-059-Q3
Collection Date: 8/7/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	72	1.2	25		mg/L	50	8/13/2014 05:27 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:11 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Sulfate	180	1.6	25		mg/L	50	8/13/2014 05:27 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	7.9	0.051	0.50		mg/L	10	8/9/2014 02:58 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-029

Client Sample ID: SA-MW-20D-059-Q3
Collection Date: 8/7/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	69	0.50	10		mg/L	20	8/13/2014 05:39 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:24 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Sulfate	92	0.66	10		mg/L	20	8/13/2014 05:39 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	5.2	0.026	0.25		mg/L	5	8/9/2014 03:11 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-030

Client Sample ID: SA-MW-20S-059-Q3
Collection Date: 8/7/2014 3:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	79	0.50	10		mg/L	20	8/13/2014 05:52 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:36 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Sulfate	110	0.66	10		mg/L	20	8/13/2014 05:52 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	7.6	0.051	0.50		mg/L	10	8/9/2014 03:24 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-032

Client Sample ID: SC-MW-01D-059-Q3
Collection Date: 8/7/2014 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	73	0.50	10		mg/L	20	8/13/2014 06:42 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 12:48 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	8.6	0.051	0.50		mg/L	10	8/8/2014 01:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-033

Client Sample ID: SC-MW-01S-059-Q3
Collection Date: 8/7/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	61	0.50	10		mg/L	20	8/13/2014 06:55 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 01:00 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808A	QC Batch: R94480				PrepDate		Analyst: PS
Nitrate as N	7.4	0.051	0.50		mg/L	10	8/8/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-034

Client Sample ID: SC-MW-02D-059-Q3
Collection Date: 8/7/2014 1:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	67	0.50	10		mg/L	20	8/13/2014 07:08 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/8/2014 11:49 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	7.1	0.051	0.50		mg/L	10	8/9/2014 04:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-035

Client Sample ID: SC-MW-02S-059-Q3
Collection Date: 8/7/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	60	0.50	10		mg/L	20	8/13/2014 08:11 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/9/2014 12:01 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	6.2	0.026	0.25		mg/L	5	8/9/2014 04:39 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-036

Client Sample ID: SC-MW-03D-059-Q3
Collection Date: 8/7/2014 3:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	37	0.50	10		mg/L	20	8/13/2014 08:23 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/9/2014 12:14 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	2.0	0.0051	0.050		mg/L	1	8/9/2014 12:14 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-037

Client Sample ID: SC-MW-03S-059-Q3
Collection Date: 8/7/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	59	0.50	10		mg/L	20	8/13/2014 08:36 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/9/2014 12:27 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	7.2	0.051	0.50		mg/L	10	8/9/2014 03:36 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-038

Client Sample ID: SC-MW-04D-059-Q3
Collection Date: 8/7/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140813B	QC Batch: R94533				PrepDate		Analyst: PS
Chloride	30	0.50	10		mg/L	20	8/13/2014 08:49 PM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Orthophosphate, Dissolved (as P)	ND	0.027	0.10		mg/L	1	8/9/2014 12:39 AM

ANIONS BY ION CHROMATOGRAPHY

EPA 300.0

RunID: IC2_140808B	QC Batch: R94483				PrepDate		Analyst: PS
Nitrate as N	8.8	0.051	0.50		mg/L	10	8/9/2014 04:27 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID	MB-R94521_CL	SampType:	MBLK	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94521			
Client ID:	PBW	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823643			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		ND		0.50										

Sample ID	LCS-R94521_CL	SampType:	LCS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94521			
Client ID:	LCSW	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823644			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		2.435		0.50	2.500	0		97.4	90	110				

Sample ID	N013132-036C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94521			
Client ID:	ZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823662			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		44.260		10							43.36	2.05	20	

Sample ID	N013132-037C-DUP	SampType:	DUP	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94521			
Client ID:	ZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823663			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		54.700		10							54.62	0.146	20	

Sample ID	N013132-036C-MS	SampType:	MS	TestCode:	300_W_CLP	Units:	mg/L	Prep Date:		RunNo:	94521			
Client ID:	ZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823664			
Analyte		Result		PQL	SPK value	SPK Ref Val		%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		92.140		10	50.00	43.36		97.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013132-037C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	103.280	10	50.00	54.62	97.3	80	120				

Sample ID N013132-037C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0		Analysis Date: 8/12/2014	SeqNo: 1823668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	102.880	10	50.00	54.62	96.5	80	120	103.3	0.388	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID MB-R94532_CL	SampType: MBLK	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: PBW	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824016						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.50

Sample ID LCS-R94532_CL	SampType: LCS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: LCSW	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824017						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2.411 0.50 2.500 0 96.4 90 110

Sample ID N013139-007C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824041						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 31.840 10 31.42 1.33 20

Sample ID N013139-007C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824042						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 79.460 10 50.00 31.42 96.1 80 120

Sample ID N013139-007C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824043						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 79.800 10 50.00 31.42 96.8 80 120 79.46 0.427 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013139-009C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824044						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	47.400	10						48.34	1.96	20	

Sample ID N013139-009C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824045						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	96.980	10	50.00	48.34	97.3	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID MB-R94533_CL	SampType: MBLK	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: PBW	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824119						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride ND 0.50

Sample ID LCS-R94533_CL	SampType: LCS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: LCSW	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824120						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 2.451 0.50 2.500 0 98.0 90 110

Sample ID N013139-030C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824126						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 81.920 10 79.08 3.53 20

Sample ID N013139-030C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824127						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 130.040 10 50.00 79.08 102 80 120

Sample ID N013139-030C-MSD	SampType: MSD	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824128						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride 132.400 10 50.00 79.08 107 80 120 130.0 1.80 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID N013139-034C-DUP	SampType: DUP	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824132						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	66.480	10						66.72	0.360	20	

Sample ID N013139-034C-MS	SampType: MS	TestCode: 300_W_CLP	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824135						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	116.580	10	50.00	66.72	99.7	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID: MB-R94480_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: PBW	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821960						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID: LCSR94480_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: LCSW	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821961						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.400 0.10 2.500 0 96.0 90 110

Sample ID: N013139-022C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZ	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821983						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID: N013139-025C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZ	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821984						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID: N013139-025C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZ	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821987						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 6.940 0.10 2.500 0 278 80 120 S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID N013139-022C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZZ	Batch ID: R94480	TestNo: EPA 300.0	Analysis Date: 8/8/2014	SeqNo: 1821988							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	8.420	0.10	2.500	0	337	80	120				S
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Sample ID N013139-022C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZZ	Batch ID: R94480	TestNo: EPA 300.0	Analysis Date: 8/8/2014	SeqNo: 1821989							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	8.628	0.10	2.500	0	345	80	120	8.420	2.44	20	S
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID MB-R94483_PO4	SampType: MBLK	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: PBW	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1822280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10

Sample ID LCS-R94483_PO4	SampType: LCS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: LCSW	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1822281						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 2.322 0.10 2.500 0 92.9 90 110

Sample ID N013139-005C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822303						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N013139-006C-DUP	SampType: DUP	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822304						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) ND 0.10 0 0 20

Sample ID N013139-005C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822305						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P) 1.392 0.10 2.500 0 55.7 80 120 S

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_PO4PGE

Sample ID N013139-006C-MS	SampType: MS	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZZ	Batch ID: R94483	TestNo: EPA 300.0	Analysis Date: 8/9/2014	SeqNo: 1822306							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	2.122	0.10	2.500	0	84.9	80	120				
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Sample ID N013139-006C-MSD	SampType: MSD	TestCode: 300_W_PO4P	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZZ	Batch ID: R94483	TestNo: EPA 300.0	Analysis Date: 8/9/2014	SeqNo: 1822307							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Orthophosphate, Dissolved (as P)	2.305	0.10	2.500	0	92.2	80	120	2.122	8.27	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID	MB-R94521_SO4	SampType:	MBLK	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94521		
Client ID:	PBW	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823680		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID	LCS-R94521_SO4	SampType:	LCS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94521		
Client ID:	LCSW	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823681		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 4.864 0.50 5.000 0 97.3 90 110

Sample ID	N013132-036C-DUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94521		
Client ID:	ZZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823700		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 56.880 10 55.78 1.95 20

Sample ID	N013132-037C-DUP	SampType:	DUP	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94521		
Client ID:	ZZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823701		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 88.180 10 84.26 4.55 20

Sample ID	N013132-036C-MS	SampType:	MS	TestCode:	300_W_SO4P	Units:	mg/L	Prep Date:		RunNo:	94521		
Client ID:	ZZZZZZ	Batch ID:	R94521	TestNo:	EPA 300.0			Analysis Date:	8/12/2014	SeqNo:	1823702		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 151.900 10 100.0 55.78 96.1 80 120

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013132-037C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823703							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	181.200	10	100.0	84.26	96.9	80	120				
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Sample ID N013132-037C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94521						
Client ID: ZZZZZZ	Batch ID: R94521	TestNo: EPA 300.0	Analysis Date: 8/12/2014	SeqNo: 1823706							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate	180.260	10	100.0	84.26	96.0	80	120	181.2	0.520	20	
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94532_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: PBW	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824053						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94532_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: LCSW	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824054						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 4.723 0.50 5.000 0 94.5 90 110

Sample ID N013139-007C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824069						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 55.800 10 60.54 8.15 20

Sample ID N013139-007C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824070						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 154.360 10 100.0 60.54 93.8 80 120

Sample ID N013139-007C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824071						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 152.960 10 100.0 60.54 92.4 80 120 154.4 0.911 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID N013139-009C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824072						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	68.280	10						68.70	0.613	20	

Sample ID N013139-009C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94532						
Client ID: ZZZZZZ	Batch ID: R94532	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824073						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	165.640	10	100.0	68.70	96.9	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID MB-R94533_SO4	SampType: MBLK	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: PBW	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824158						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate ND 0.50

Sample ID LCS-R94533_SO4	SampType: LCS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: LCSW	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824159						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 4.704 0.50 5.000 0 94.1 90 110

Sample ID N013139-030C-DUP	SampType: DUP	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824165						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 110.520 10 108.0 2.29 20

Sample ID N013139-030C-MS	SampType: MS	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824166						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 207.060 10 100.0 108.0 99.0 80 120

Sample ID N013139-030C-MSD	SampType: MSD	TestCode: 300_W_SO4P	Units: mg/L	Prep Date:	RunNo: 94533						
Client ID: ZZZZZ	Batch ID: R94533	TestNo: EPA 300.0		Analysis Date: 8/13/2014	SeqNo: 1824167						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sulfate 210.240 10 100.0 108.0 102 80 120 207.1 1.52 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID	MB-R94480_NO3	SampType:	MBLK	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94480
Client ID:	PBW	Batch ID:	R94480	TestNo:	EPA 300.0	Analysis Date:	8/8/2014	SeqNo:	1821921		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N	ND	0.050									
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Sample ID	LCS-R94480_NO3	SampType:	LCS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94480
Client ID:	LCSW	Batch ID:	R94480	TestNo:	EPA 300.0	Analysis Date:	8/8/2014	SeqNo:	1821922		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N	0.903	0.050	1.000	0	90.3	90	110				
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Sample ID	N013139-022C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94480
Client ID:	ZZZZZZ	Batch ID:	R94480	TestNo:	EPA 300.0	Analysis Date:	8/8/2014	SeqNo:	1821944		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N	0.318	0.050			0.3090	2.87	20				
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Sample ID	N013139-025C-DUP	SampType:	DUP	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94480
Client ID:	ZZZZZZ	Batch ID:	R94480	TestNo:	EPA 300.0	Analysis Date:	8/8/2014	SeqNo:	1821945		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N	0.274	0.050			0.2760	0.727	20				
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Sample ID	N013139-025C-MS	SampType:	MS	TestCode:	300WLLNO3	Units:	mg/L	Prep Date:		RunNo:	94480
Client ID:	ZZZZZZ	Batch ID:	R94480	TestNo:	EPA 300.0	Analysis Date:	8/8/2014	SeqNo:	1821948		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N	1.200	0.050	1.000	0.2760	92.4	80	120				
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Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013139-022C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZZ	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821949						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.287	0.050	1.000	0.3090	97.8	80	120				

Sample ID N013139-022C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94480						
Client ID: ZZZZZZ	Batch ID: R94480	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1821950						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.260	0.050	1.000	0.3090	95.1	80	120	1.287	2.12	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID MB-R94483_NO3	SampType: MBLK	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: PBW	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1822241						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050

Sample ID LCS-R94483_NO3	SampType: LCS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: LCSW	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/8/2014	SeqNo: 1822242						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.942 0.050 1.000 0 94.2 90 110

Sample ID N013139-005C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.032 0.050 0.04000 0 20

Sample ID N013139-006C-DUP	SampType: DUP	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822267						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N ND 0.050 0 0 20

Sample ID N013139-005C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822268						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate as N 0.955 0.050 1.000 0.04000 91.5 80 120

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID N013139-006C-MS	SampType: MS	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822269						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.942	0.050	1.000	0	94.2	80	120				

Sample ID N013139-006C-MSD	SampType: MSD	TestCode: 300WLLNO3	Units: mg/L	Prep Date:	RunNo: 94483						
Client ID: ZZZZZZ	Batch ID: R94483	TestNo: EPA 300.0		Analysis Date: 8/9/2014	SeqNo: 1822270						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.971	0.050	1.000	0	97.1	80	120	0.9420	3.03	20	

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-21D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 12:56 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-21S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 12:38:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-003	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 12:33 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-004

Client Sample ID: MW-911-059-Q3
Collection Date: 8/7/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 12:10 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-005

Client Sample ID: SA-MW-22D-059-Q3
Collection Date: 8/7/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 11:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-006

Client Sample ID: SA-MW-22S-059-Q3
Collection Date: 8/7/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 11:24 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-007

Client Sample ID: SA-MW-24D-059-Q3
Collection Date: 8/7/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 11:01 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-008

Client Sample ID: SA-MW-24S-059-Q3
Collection Date: 8/7/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 10:38 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-009

Client Sample ID: SA-MW-25D-059-Q3
Collection Date: 8/7/2014 10:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 10:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-25S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:54:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-010	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 09:07 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-012

Client Sample ID: MW-913-059-Q3
Collection Date: 8/7/2014 2:32:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 08:44 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-013

Client Sample ID: SC-MW-05D-059-Q3
Collection Date: 8/7/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1	8/14/2014 08:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-014

Client Sample ID: SC-MW-05S-059-Q3
Collection Date: 8/7/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 07:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-015

Client Sample ID: SC-MW-06D-059-Q3
Collection Date: 8/7/2014 12:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 07:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-016

Client Sample ID: SC-MW-06S-059-Q3
Collection Date: 8/7/2014 12:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/14/2014 07:35 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-017

Client Sample ID: SC-MW-07D-059-Q3
Collection Date: 8/7/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 03:37 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-07S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-018	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140814A	QC Batch: R94553			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 03:59 AM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-019

Client Sample ID: SC-MW-04S-059-Q3
Collection Date: 8/7/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 03:07 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-020

Client Sample ID: SC-MW-08S-059-Q3
Collection Date: 8/7/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 04:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-022

Client Sample ID: SA-MW-16D-059-Q3
Collection Date: 8/7/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 05:48 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-023

Client Sample ID: MW-910-059-Q3
Collection Date: 8/7/2014 9:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 04:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-024

Client Sample ID: SA-MW-16S-059-Q3
Collection Date: 8/7/2014 9:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 06:11 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-025

Client Sample ID: SA-MW-17D-059-Q3
Collection Date: 8/7/2014 10:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560				PrepDate		Analyst: PS
Organic Carbon, Total	ND	0.041	1.0		mg/L	1	8/15/2014 06:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-026

Client Sample ID: SA-MW-17S-059-Q3
Collection Date: 8/7/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 06:57 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-027

Client Sample ID: SA-MW-18D-059-Q3
Collection Date: 8/7/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 07:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-028

Client Sample ID: SA-MW-18S-059-Q3
Collection Date: 8/7/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 07:42 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-029

Client Sample ID: SA-MW-20D-059-Q3
Collection Date: 8/7/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 08:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-030

Client Sample ID: SA-MW-20S-059-Q3
Collection Date: 8/7/2014 3:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 08:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-032

Client Sample ID: SC-MW-01D-059-Q3
Collection Date: 8/7/2014 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 08:51 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-033

Client Sample ID: SC-MW-01S-059-Q3
Collection Date: 8/7/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 09:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-034

Client Sample ID: SC-MW-02D-059-Q3
Collection Date: 8/7/2014 1:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 10:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-02S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 12:56:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-035	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 10:46 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-036

Client Sample ID: SC-MW-03D-059-Q3
Collection Date: 8/7/2014 3:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 11:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-037

Client Sample ID: SC-MW-03S-059-Q3
Collection Date: 8/7/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140815A	QC Batch: R94560			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/15/2014 11:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-038

Client Sample ID: SC-MW-04D-059-Q3
Collection Date: 8/7/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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TOTAL ORGANIC CARBON

SM 5310C

RunID: TOC2_140818A	QC Batch: R94578			PrepDate			Analyst: PS
Organic Carbon, Total	ND	0.041	1.0	mg/L	1		8/18/2014 07:06 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94553	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: PBW	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94553	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: LCSW	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.481 1.0 10.00 0 105 85 115

Sample ID N013139-015D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: ZZZZZ	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824454						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.483 1.0 10.00 0.9091 95.7 75 125

Sample ID N013139-015D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94553						
Client ID: ZZZZZ	Batch ID: R94553	TestNo: SM 5310C		Analysis Date: 8/14/2014	SeqNo: 1824455						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.480 1.0 10.00 0.9091 95.7 75 125 10.48 0.0210 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94560	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94560						
Client ID: PBW	Batch ID: R94560	TestNo: SM 5310C		Analysis Date: 8/15/2014	SeqNo: 1825130						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94560	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94560						
Client ID: LCSW	Batch ID: R94560	TestNo: SM 5310C		Analysis Date: 8/15/2014	SeqNo: 1825131						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.634 1.0 10.00 0 106 85 115

Sample ID N013139-023D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94560						
Client ID: ZZZZZ	Batch ID: R94560	TestNo: SM 5310C		Analysis Date: 8/15/2014	SeqNo: 1825136						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.399 1.0 10.00 0.3066 101 75 125

Sample ID N013139-023D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94560						
Client ID: ZZZZZ	Batch ID: R94560	TestNo: SM 5310C		Analysis Date: 8/15/2014	SeqNo: 1825137						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.445 1.0 10.00 0.3066 101 75 125 10.40 0.439 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 5310C_W_T

Sample ID MB-R94578	SampType: MBLK	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94578						
Client ID: PBW	Batch ID: R94578	TestNo: SM 5310C		Analysis Date: 8/18/2014	SeqNo: 1825714						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total ND 1.0

Sample ID LCS-R94578	SampType: LCS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94578						
Client ID: LCSW	Batch ID: R94578	TestNo: SM 5310C		Analysis Date: 8/18/2014	SeqNo: 1825715						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 10.235 1.0 10.00 0 102 85 115

Sample ID N013142-006D-MS	SampType: MS	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94578						
Client ID: ZZZZZ	Batch ID: R94578	TestNo: SM 5310C		Analysis Date: 8/18/2014	SeqNo: 1825716						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 9.233 1.0 10.00 0.4419 87.9 75 125

Sample ID N013142-006D-MSD	SampType: MSD	TestCode: 5310C_W_T	Units: mg/L	Prep Date:	RunNo: 94578						
Client ID: ZZZZZ	Batch ID: R94578	TestNo: SM 5310C		Analysis Date: 8/18/2014	SeqNo: 1825717						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Organic Carbon, Total 9.220 1.0 10.00 0.4419 87.8 75 125 9.233 0.140 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-21D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 11:46:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-002	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	0.048	0.0013	0.020	mg/L	1	8/12/2014 11:27 AM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-003

Client Sample ID: SA-MW-21S-059-Q3
Collection Date: 8/7/2014 12:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 10:54 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-004

Client Sample ID: MW-911-059-Q3
Collection Date: 8/7/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	1.2	0.0013	0.020	mg/L	1	8/12/2014 11:32 AM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-22D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 1:29:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-005	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288	PrepDate: 8/11/2014	Analyst: CEI
Iron	1.2 0.0013	0.020	mg/L 1 8/12/2014 11:37 AM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-007

Client Sample ID: SA-MW-24D-059-Q3
Collection Date: 8/7/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 11:48 AM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-008

Client Sample ID: SA-MW-24S-059-Q3
Collection Date: 8/7/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:17 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-009

Client Sample ID: SA-MW-25D-059-Q3
Collection Date: 8/7/2014 10:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-010

Client Sample ID: SA-MW-25S-059-Q3
Collection Date: 8/7/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-012

Client Sample ID: MW-913-059-Q3
Collection Date: 8/7/2014 2:32:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:30 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-013

Client Sample ID: SC-MW-05D-059-Q3
Collection Date: 8/7/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:35 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-014

Client Sample ID: SC-MW-05S-059-Q3
Collection Date: 8/7/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 12:39 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-015

Client Sample ID: SC-MW-06D-059-Q3
Collection Date: 8/7/2014 12:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 01:47 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-016

Client Sample ID: SC-MW-06S-059-Q3
Collection Date: 8/7/2014 12:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 01:51 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-017

Client Sample ID: SC-MW-07D-059-Q3
Collection Date: 8/7/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 01:56 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-07S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:21:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-018	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288	PrepDate: 8/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			8/12/2014 02:09 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-04S-059-Q3
Lab Order: N013139 **Collection Date:** 8/7/2014 11:16:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013139-019

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140812A** QC Batch: **46288** PrepDate: **8/11/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/12/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-08S-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 9:07:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-020	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 02:18 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-022

Client Sample ID: SA-MW-16D-059-Q3
Collection Date: 8/7/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 02:23 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-023

Client Sample ID: MW-910-059-Q3
Collection Date: 8/7/2014 9:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46288			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 02:28 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SA-MW-16S-059-Q3
Lab Order: N013139 **Collection Date:** 8/7/2014 9:44:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013139-024

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140812A** QC Batch: **46289** PrepDate: **8/11/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/12/2014 03:13 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SA-MW-17D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:33:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-025	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289	PrepDate: 8/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L 1
			8/12/2014 02:41 PM

Qualifiers:

B Analyte detected in the associated Method Blank	E Value above quantitation range
H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
DO Surrogate Diluted Out	



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-026

Client Sample ID: SA-MW-17S-059-Q3
Collection Date: 8/7/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:17 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-027

Client Sample ID: SA-MW-18D-059-Q3
Collection Date: 8/7/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:22 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-028

Client Sample ID: SA-MW-18S-059-Q3
Collection Date: 8/7/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-029

Client Sample ID: SA-MW-20D-059-Q3
Collection Date: 8/7/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-030

Client Sample ID: SA-MW-20S-059-Q3
Collection Date: 8/7/2014 3:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:35 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL	Client Sample ID: SC-MW-01D-059-Q3
Lab Order: N013139	Collection Date: 8/7/2014 10:10:00 AM
Project: PGE Hinkley, 492581.UR.IR.FW	Matrix: WATER
Lab ID: N013139-032	

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289	PrepDate: 8/11/2014	Analyst: CEI
Iron	ND 0.0013	0.020	mg/L
			1
			8/12/2014 03:39 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-033

Client Sample ID: SC-MW-01S-059-Q3
Collection Date: 8/7/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 03:44 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-034

Client Sample ID: SC-MW-02D-059-Q3
Collection Date: 8/7/2014 1:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 04:13 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL **Client Sample ID:** SC-MW-02S-059-Q3
Lab Order: N013139 **Collection Date:** 8/7/2014 12:56:00 PM
Project: PGE Hinkley, 492581.UR.IR.FW **Matrix:** WATER
Lab ID: N013139-035

Analyses **Result** **MDL** **PQL** **Qual** **Units** **DF** **Date Analyzed**

DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: **ICP2_140812A** QC Batch: **46289** PrepDate: **8/11/2014** Analyst: **CEI**
Iron ND 0.0013 0.020 mg/L 1 8/12/2014 04:17 PM

Qualifiers: B Analyte detected in the associated Method Blank E Value above quantitation range
H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
S Spike/Surrogate outside of limits due to matrix interference Results are wet unless otherwise specified
DO Surrogate Diluted Out



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-036

Client Sample ID: SC-MW-03D-059-Q3
Collection Date: 8/7/2014 3:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 04:21 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-037

Client Sample ID: SC-MW-03S-059-Q3
Collection Date: 8/7/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI	
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 04:30 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-038

Client Sample ID: SC-MW-04D-059-Q3
Collection Date: 8/7/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED METALS BY ICP

EPA 3010A

EPA 6010B

RunID: ICP2_140812A	QC Batch: 46289			PrepDate	8/11/2014	Analyst: CEI
Iron	ND	0.0013	0.020	mg/L	1	8/12/2014 04:34 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46288	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518
Client ID: PBW	Batch ID: 46288	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823245
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	ND	0.020			

Sample ID LCS-46288	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518
Client ID: LCSW	Batch ID: 46288	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823246
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.101	0.020	0.1000	0	101 85 115

Sample ID N013139-003B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518
Client ID: ZZZZZ	Batch ID: 46288	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823253
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.100	0.020	0.1000	0.002260	97.9 75 125

Sample ID N013139-003B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518
Client ID: ZZZZZ	Batch ID: 46288	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823254
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.097	0.020	0.1000	0.002260	94.8 75 125 0.1002 3.14 20

Sample ID N013139-014B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518
Client ID: ZZZZZ	Batch ID: 46288	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823271
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Iron	0.115	0.020	0.1000	0.004497	111 75 125

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID MB-46289	SampType: MBLK	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518						
Client ID: PBW	Batch ID: 46289	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823282						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron ND 0.020

Sample ID LCS-46289	SampType: LCS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518						
Client ID: LCSW	Batch ID: 46289	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823283						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.105 0.020 0.1000 0 105 85 115

Sample ID N013139-025B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518						
Client ID: ZZZZZZ	Batch ID: 46289	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823289						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.112 0.020 0.1000 0.002429 110 75 125

Sample ID N013139-025B-MSD	SampType: MSD	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518						
Client ID: ZZZZZZ	Batch ID: 46289	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823290						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.103 0.020 0.1000 0.002429 101 75 125 0.1125 8.52 20

Sample ID N013139-036B-MS	SampType: MS	TestCode: 6010WD_HIN	Units: mg/L	Prep Date: 8/11/2014	RunNo: 94518						
Client ID: ZZZZZZ	Batch ID: 46289	TestNo: EPA 6010B EPA 3010A		Analysis Date: 8/12/2014	SeqNo: 1823307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron 0.104 0.020 0.1000 0 104 75 125

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-002

Client Sample ID: SA-MW-21D-059-Q3
Collection Date: 8/7/2014 11:46:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	1.7	0.027	0.10	µg/L	1	8/11/2014 12:53 PM	
Manganese	71	0.026	0.50	µg/L	1	8/11/2014 12:53 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-003

Client Sample ID: SA-MW-21S-059-Q3
Collection Date: 8/7/2014 12:38:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285				PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10		µg/L	1	8/11/2014 12:59 PM
Manganese	12	0.026	0.50		µg/L	1	8/11/2014 12:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-004

Client Sample ID: MW-911-059-Q3
Collection Date: 8/7/2014 1:35:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	27	0.027	0.10	µg/L	1	8/11/2014 01:09 PM	
Manganese	2500	0.64	12	µg/L	25	8/11/2014 08:01 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-005

Client Sample ID: SA-MW-22D-059-Q3
Collection Date: 8/7/2014 1:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	27	0.027	0.10	µg/L	1	8/11/2014 01:14 PM	
Manganese	2500	0.64	12	µg/L	25	8/11/2014 08:06 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-006

Client Sample ID: SA-MW-22S-059-Q3
Collection Date: 8/7/2014 2:05:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	31	0.027	0.10		µg/L	1	8/11/2014 01:20 PM
Manganese	1300	0.64	12		µg/L	25	8/11/2014 08:12 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-007

Client Sample ID: SA-MW-24D-059-Q3
Collection Date: 8/7/2014 9:01:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	3.0	0.027	0.10	µg/L	1	8/11/2014 01:25 PM
Manganese	2.4	0.026	0.50	µg/L	1	8/11/2014 01:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-008

Client Sample ID: SA-MW-24S-059-Q3
Collection Date: 8/7/2014 9:35:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	1.3	0.027	0.10	µg/L	1	8/11/2014 01:42 PM	
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 01:42 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-009

Client Sample ID: SA-MW-25D-059-Q3
Collection Date: 8/7/2014 10:22:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	1.0	0.027	0.10	µg/L	1	8/11/2014 01:47 PM	
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 01:47 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-010

Client Sample ID: SA-MW-25S-059-Q3
Collection Date: 8/7/2014 10:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.6	0.027	0.10	µg/L	1	8/11/2014 01:53 PM
Manganese	1.3	0.026	0.50	µg/L	1	8/11/2014 01:53 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-012

Client Sample ID: MW-913-059-Q3
Collection Date: 8/7/2014 2:32:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.4	0.027	0.10	µg/L	1	8/11/2014 01:58 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 01:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-013

Client Sample ID: SC-MW-05D-059-Q3
Collection Date: 8/7/2014 2:22:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10	µg/L	1	8/11/2014 02:04 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:04 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-014

Client Sample ID: SC-MW-05S-059-Q3
Collection Date: 8/7/2014 3:29:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	2.6	0.027	0.10		µg/L	1	8/11/2014 02:09 PM
Manganese	ND	0.026	0.50		µg/L	1	8/11/2014 02:09 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-015

Client Sample ID: SC-MW-06D-059-Q3
Collection Date: 8/7/2014 12:59:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10	µg/L	1	8/11/2014 02:14 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:14 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-016

Client Sample ID: SC-MW-06S-059-Q3
Collection Date: 8/7/2014 12:18:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.4	0.027	0.10	µg/L	1	8/11/2014 02:19 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:19 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-017

Client Sample ID: SC-MW-07D-059-Q3
Collection Date: 8/7/2014 11:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.8	0.027	0.10	µg/L	1	8/11/2014 02:25 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:25 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-018

Client Sample ID: SC-MW-07S-059-Q3
Collection Date: 8/7/2014 10:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.6	0.027	0.10	µg/L	1	8/11/2014 02:30 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:30 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-019

Client Sample ID: SC-MW-04S-059-Q3
Collection Date: 8/7/2014 11:16:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.4	0.027	0.10	µg/L	1	8/11/2014 02:47 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:47 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-020

Client Sample ID: SC-MW-08S-059-Q3
Collection Date: 8/7/2014 9:07:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.7	0.027	0.10	µg/L	1	8/11/2014 02:52 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 02:52 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-022

Client Sample ID: SA-MW-16D-059-Q3
Collection Date: 8/7/2014 9:06:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	0.96	0.027	0.10	µg/L	1	8/11/2014 02:58 PM
Manganese	14	0.026	0.50	µg/L	1	8/11/2014 02:58 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-023

Client Sample ID: MW-910-059-Q3
Collection Date: 8/7/2014 9:54:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46285			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.9	0.027	0.10	µg/L	1	8/11/2014 03:03 PM
Manganese	0.89	0.026	0.50	µg/L	1	8/11/2014 03:03 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-024

Client Sample ID: SA-MW-16S-059-Q3
Collection Date: 8/7/2014 9:44:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Arsenic	3.0	0.027	0.10		µg/L	1	8/11/2014 03:59 PM
Manganese	1.1	0.026	0.50		µg/L	1	8/11/2014 03:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-025

Client Sample ID: SA-MW-17D-059-Q3
Collection Date: 8/7/2014 10:33:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	1.5	0.027	0.10	µg/L	1	8/11/2014 04:04 PM	
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:04 PM	

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-026

Client Sample ID: SA-MW-17S-059-Q3
Collection Date: 8/7/2014 11:21:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.7	0.027	0.10		µg/L	1	8/11/2014 04:10 PM
Manganese	1.2	0.026	0.50		µg/L	1	8/11/2014 04:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-027

Client Sample ID: SA-MW-18D-059-Q3
Collection Date: 8/7/2014 12:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	2.7	0.027	0.10	µg/L	1	8/11/2014 04:15 PM	
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:15 PM	

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-028

Client Sample ID: SA-MW-18S-059-Q3
Collection Date: 8/7/2014 12:57:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	0.72	0.027	0.10	µg/L	1	8/11/2014 04:21 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-029

Client Sample ID: SA-MW-20D-059-Q3
Collection Date: 8/7/2014 2:03:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286				PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.5	0.027	0.10		µg/L	1	8/11/2014 04:26 PM
Manganese	31	0.026	0.50		µg/L	1	8/11/2014 04:26 PM

Qualifiers: B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
E Value above quantitation range
ND Not Detected at the Reporting Limit
Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-030

Client Sample ID: SA-MW-20S-059-Q3
Collection Date: 8/7/2014 3:06:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.3	0.027	0.10	µg/L	1	8/11/2014 04:32 PM
Manganese	1.5	0.026	0.50	µg/L	1	8/11/2014 04:32 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-032

Client Sample ID: SC-MW-01D-059-Q3
Collection Date: 8/7/2014 10:10:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.2	0.027	0.10	µg/L	1	8/11/2014 04:37 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:37 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-033

Client Sample ID: SC-MW-01S-059-Q3
Collection Date: 8/7/2014 9:08:00 AM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.7	0.027	0.10	µg/L	1	8/11/2014 04:43 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:43 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-034

Client Sample ID: SC-MW-02D-059-Q3
Collection Date: 8/7/2014 1:42:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	0.79	0.027	0.10	µg/L	1	8/11/2014 04:59 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 04:59 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-035

Client Sample ID: SC-MW-02S-059-Q3
Collection Date: 8/7/2014 12:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI	
Arsenic	2.3	0.027	0.10		µg/L	1	8/11/2014 05:05 PM
Manganese	ND	0.026	0.50		µg/L	1	8/11/2014 05:05 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-036

Client Sample ID: SC-MW-03D-059-Q3
Collection Date: 8/7/2014 3:56:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	1.4	0.027	0.10	µg/L	1	8/11/2014 05:10 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 05:10 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-037

Client Sample ID: SC-MW-03S-059-Q3
Collection Date: 8/7/2014 3:04:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.2	0.027	0.10	µg/L	1	8/11/2014 05:16 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 05:16 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ANALYTICAL RESULTS

Print Date: 21-Aug-14

CLIENT: CH2M HILL
Lab Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW
Lab ID: N013139-038

Client Sample ID: SC-MW-04D-059-Q3
Collection Date: 8/7/2014 12:02:00 PM
Matrix: WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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DISSOLVED ICP-MS METALS

EPA 3010A

EPA 6020

RunID: ICP7_140811A	QC Batch: 46286			PrepDate	8/11/2014	Analyst: CEI
Arsenic	2.3	0.027	0.10	µg/L	1	8/11/2014 05:21 PM
Manganese	ND	0.026	0.50	µg/L	1	8/11/2014 05:21 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46285	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519
Client ID: PBW	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823499
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	ND	0.10			
Manganese	ND	0.50			

Sample ID LCS-46285	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519
Client ID: LCSW	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823500
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	10.456	0.10	10.00	0	105 85 115
Manganese	104.206	0.50	100.0	0	104 85 115

Sample ID N013139-002B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823527
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.069	0.10	10.00	1.706	104 75 125
Manganese	166.338	0.50	100.0	70.70	95.6 75 125

Sample ID N013139-002B-MSD	SampType: MSD	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823528
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Arsenic	12.025	0.10	10.00	1.706	103 75 125 12.07 0.367 20
Manganese	161.226	0.50	100.0	70.70	90.5 75 125 166.3 3.12 20

Sample ID N013139-013B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823529
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013139-013B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZZ	Batch ID: 46285	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823529						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.792	0.10	10.00	2.474	103	75	125				
Manganese	94.729	0.50	100.0	0	94.7	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID MB-46286	SampType: MBLK	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: PBW	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823530						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID LCS-46286	SampType: LCS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: LCSW	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823533						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.235	0.10	10.00	0	102	85	115				
Manganese	106.281	0.50	100.0	0	106	85	115				

Sample ID N013139-024B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823552						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	13.510	0.10	10.00	2.981	105	75	125				
Manganese	101.751	0.50	100.0	1.083	101	75	125				

Sample ID N013139-024B-MSD	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823553						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	13.063	0.10	10.00	2.981	101	75	125	13.51	3.36	0	
Manganese	99.610	0.50	100.0	1.083	98.5	75	125	101.8	2.13	0	

Sample ID N013139-035B-MS	SampType: MS	TestCode: 6020WDAsM	Units: µg/L	Prep Date: 8/11/2014	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46286	TestNo: EPA 6020 EPA 3010A		Analysis Date: 8/11/2014	SeqNo: 1823554						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.731	0.10	10.00	2.287	104	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID	N013139-035B-MS	SampType:	MS	TestCode:	6020WDAsM	Units:	µg/L	Prep Date:	8/11/2014	RunNo:	94519		
Client ID:	ZZZZZZ	Batch ID:	46286	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	8/11/2014	SeqNo:	1823554		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese		98.153		0.50	100.0	0	98.2	75	125				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS	
Project Name PGE Hinkley				Preservatives: (NH4)2SO4, NH4, OH, 4°C	(NH4)2SO4, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H2SO4, 4°C			
Location Hinkley					Filtered:	Field	Field	Field	Field	Field	Field			NA
Project Number 492581.UR.IR.FW					Holding Time (days):	28	180	180	2	2	2			28
Project Manager Jennifer Low						Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As, Cl, Mn	Anions (E300.0) FF Cl, NO3N	Anions (E300.0) FF NO3N, SO4, Cl	Ortho-Phosphate (E300.0) FF	TOC (E6310)		
Sample Manager Jim Hanvey														
Cell Number (404) 229-2181														
Fax Number (510) 622-9136														
Task Order 59														
Project 2014-COMPLIANCE-IRZ-059-Q3														
Turnaround Time 10 Days														
Shipping Date:														
COC Number:														
SAMPLE ID	DATE	TIME	Matrix											
MW-715-059-Q3	8/7/2014	1515	Water	X								1	LB	
SA-MW-21D-059-Q3	8/7/2014	1146	Water	X	X	X		X	X	X		6	LB	
SA-MW-21S-059-Q3	8/7/2014	1238	Water	X	X	X		X	X	X		6	LB	
MW-911-059-Q3	8/7/2014	1335	Water	X	X	X		X	X	X		6	LB	
SA-MW-22D-059-Q3	8/7/2014	1329	Water	X	X	X		X	X	X		6	LB	
SA-MW-22S-059-Q3	8/7/2014	1405	Water	X	X	X		X	X	X		6	LB	
SA-MW-24D-059-Q3	8/7/2014	0901	Water	X	X	X		X	X	X		6	LB	
SA-MW-24S-059-Q3	8/7/2014	0935	Water	X	X	X		X	X	X		6	LB	
SA-MW-25D-059-Q3	8/7/2014	1022	Water	X	X	X		X	X	X		6	LB	
SA-MW-25S-059-Q3	8/7/2014	1054	Water	X	X	X		X	X	X		6	LB	
MW-716-059-Q3	8/7/2014	0830	Water	X								1	MD	
MW-913-059-Q3	8/7/2014	1432	Water	X	X	X	X		X	X		6	MD	
SC-MW-05D-059-Q3	8/7/2014	1422	Water	X	X	X	X		X	X		6	MD	
SC-MW-05S-059-Q3	8/7/2014	1529	Water	X	X	X	X		X	X		6	MD	
SC-MW-06D-059-Q3	8/7/2014	1259	Water	X	X	X	X		X	X		6	MD	
SC-MW-06S-059-Q3	8/7/2014	1218	Water	X	X	X	X		X	X		6	MD	
SC-MW-07D-059-Q3	8/7/2014	1106	Water	X	X	X	X		X	X		6	MD	

N013139-1

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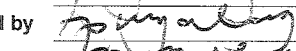


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Approved by <i>[Signature]</i> Sampled by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i> Relinquished by <i>[Signature]</i> Received by <i>[Signature]</i>	Signatures Date/Time 8.7.14/1536 8/7/14 8/7/14 1535 8/7/14 1535 8/7/14 1535 8/7/14 1535	Shipping Details Method of Shipment: On Ice: yes / no 2.9°C/5.1°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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Project Name PGE Hinkley Location Hinkley Project Number 492581.UR.IR.FW Project Manager Jennifer Low Sample Manager Jim Hanvey Cell Number (404) 229-2181 Fax Number (510) 622-9136 Task Order 59 Project 2014-COMPLIANCE-IRZ-059-Q3 Turnaround Time 10 Days Shipping Date: COC Number:				Container:	250 ml Poly	500 ml Poly	500 ml Poly	1000ml Poly	1000ml Poly	1000ml Poly	3X40 ml VOA	Number of Containers	COMMENTS
SAMPLE ID	DATE	TIME	Matrix	Preservatives: (NH4)2SO4, NH4OH, 4°C	HNO3, 4°C	HNO3, 4°C	4°C	4°C	4°C	H2SO4, 4°C			
				Filtered:	Field	Field	Field	Field	Field	Field	NA		
				Holding Time (days):	28	180	180	2	2	2	28		
					Cr(VI) (E218.6) FF	Metals Dissolved (6010BDIs) FF Fe	Metals Dissolved (6020AFF) FF As,Cr,Mn	Anions (E300.0) FF Cl,NO3N	Anions (E300.0) FF NO3N,SO4,Cl	Ortho-Phosphate (E300.0) FF	TOC (E5310)		
SC-MW-07S-059-Q3	8/7/2014	1021	Water	X	X	X	X		X	X		6 MD	
SC-MW-04S-059-Q3	8/7/2014	1116	Water	X	X	X	X		X	X		6 PM	
SC-MW-08S-059-Q3	8/7/2014	0907	Water	X	X	X	X		X	X		6 MD	
MW-717-059-Q3	8/7/2014	0915	Water	X								1 NT	
SA-MW-16D-059-Q3	8/7/2014	0906	Water	X	X	X		X	X	X		6 NT	
MW-910-059-Q3	8/7/2014	0954	Water	X	X	X		X	X	X		6 NT	
SA-MW-16S-059-Q3	8/7/2014	0944	Water	X	X	X		X	X	X		6 NT	
SA-MW-17D-059-Q3	8/7/2014	1033	Water	X	X	X		X	X	X		6 NT	
SA-MW-17S-059-Q3	8/7/2014	1121	Water	X	X	X		X	X	X		6 NT	
SA-MW-18D-059-Q3	8/7/2014	1203	Water	X	X	X		X	X	X		6 NT	
SA-MW-18S-059-Q3	8/7/2014	1257	Water	X	X	X		X	X	X		6 NT	
SA-MW-20D-059-Q3	8/7/2014	1403	Water	X	X	X		X	X	X		6 NT	
SA-MW-20S-059-Q3	8/7/2014	1506	Water	X	X	X		X	X	X		6 NT	
MW-718-059-Q3	8/7/2014	1023	Water	X								1 PM	
SC-MW-01D-059-Q3	8/7/2014	1010	Water	X	X	X	X		X	X		6 PM	
SC-MW-01S-059-Q3	8/7/2014	0908	Water	X	X	X	X		X	X		6 PM	
SC-MW-02D-059-Q3	8/7/2014	1342	Water	X	X	X	X		X	X		6 PM	

NO 13139-18
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Approved by  Sampled by  Relinquished by  Received by  Relinquished by  Received by 	Signatures Date/Time 8/7/14/1826 8/7/14 8/7/14 1025 8/7/14 1525 8/7/14 2/00 8/7/14	Shipping Details Method of Shipment: On Ice: yes / no 30°C / 5.6°C / 2.8°C Airbill No: Lab Name: Advanced Technology Laboratories Lab Phone: (702) 307-2659	ATTN: Special Instructions: Report Copy to: Shawn Duffy (530) 941-9227 2525 Airpark Drive, Redding, CA 96001
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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 8/7/2014 Workorder: N013139
 Rep sample Temp (Deg C): 2.9/3.1/3.2/3.6/2.8/3.5 IR Gun ID: 1
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B

AC ACortez 8/8/2014

Reviewed By:

fgg 08/08/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC, LOW LEVEL
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013139-031A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 0.026132 * 1 \\ &= 0.026132\end{aligned}$$

Since PQL is $0.06 \mu\text{g/L}$,

$$\text{Cr}^{+6}, \mu\text{g/L} = \text{ND}$$

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:

A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013139-003A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 10.5939 * 1 \\ &= 10.5939\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 11$$



8/21/2014

Sample Calculation

METHOD: EPA 300.0
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: Water

FORMULA:

Calculate the Chloride concentration, in mg/L, in the original sample as follows:

$$\text{Chloride, mg/L} = A * DF$$

where:


$$\begin{aligned} A &= \text{mg/L, IC calculated concentration} \\ DF &= \text{dilution factor} \end{aligned}$$

For **N013139-035C** concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Chloride, mg/L} &= 3.018 * 20 \\ &= 60.36 \end{aligned}$$

Reporting result in two significant figures,

$$\text{Chloride, mg/L} = 60$$

 8/21/2014

Sample Calculation

METHOD: SM5310C

TEST NAME: TOTAL ORGANIC CARBON

MATRIX: WATER

FORMULA:

Calculate the TOC concentration, in mg/L, in the original sample as follows:

$$\text{TOC} = [A] [\text{DF}] - B$$

where:

A = mg/L, instrument calculated concentration

DF = dilution factor

B = mg/L, TOC concentration in the calibration blank

For: **N013139-015D**

The concentration in mg/L is calculated as follows:

$$\text{TOC} = [1.02660] [1] - 0.11750$$

$$\text{TOC} = 0.90910$$

Reporting results in two significant figures,

$$\text{TOC} = 0.91 \text{ mg/L}$$

$$\text{TOC} = \text{ND}$$

PS 8/19/2014

Sample Calculation

METHOD: EPA 6010

TEST NAME: Heavy Metals by ICP

MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in mg/L, in the original sample as follows:

$$\text{Iron, mg/L} = A * DF * PF$$

where:

A = mg/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Amt. of Sample mL

For Sample **N013139-002B**, the concentration in mg/L is calculated as follows:

$$\begin{aligned} \text{Iron, mg/L} &= 0.04766053729 * 1 * (25/25) \\ &= 0.04766053729 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Iron, mg/L} = \mathbf{0.048}$$



8/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013139
Test Method: EPA 6010
Analysis Date: 8/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46288

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013139-003B-DT 5X	Iron	mg/L	0	NA	0.003765449	100.00%	10

0.00226

Note: NA - Not Applicable

Mary
for

8/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013139
Test Method: EPA 6010
Analysis Date: 8/12/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46289

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima DV Series

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable for Fe. The calculated value is <25X the RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPrefval	%DIFF	%DIFFlimit
N013139-025B-DT 5X	Iron	mg/L	0	NA	0.002428859	100.00%	10

Note: NA - Not Applicable

CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID	N013139-003B-PS	SampType:	PS	TestCode:	6010WD_HIN	Units:	mg/L	Prep Date:		RunNo:	94518		
Client ID:	ZZZZZZ	Batch ID:	46288	TestNo:	EPA 6010B EPA 3010A			Analysis Date:	8/12/2014	SeqNo:	1823312		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron		2.507		0.020	2.500	0.002260	100	80	120				
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Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010WD_HINK

Sample ID	N013139-025B-PS	SampType:	PS	TestCode:	6010WD_HIN	Units:	mg/L	Prep Date:		RunNo:	94518		
Client ID:	ZZZZZZ	Batch ID:	46289	TestNo:	EPA 6010B EPA 3010A			Analysis Date:	8/12/2014	SeqNo:	1823316		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron		2.943		0.020	2.500	0.002429	118	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out

E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values

H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor

PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013139-002B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 23.0835365942282 * 1 * (25/25) \\ &= 23.0835365942282 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = \mathbf{23}$$



8/21/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013139
Test Method: EPA 6020
Analysis Date: 8/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46285

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr & As. The calculated values are <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013139-002B-DT 5X	Chromium	µg/L	24.24764311	NA	23.08353659	5.04%	10
N013139-002B-DT 5X	Arsenic	µg/L	1.630893266	NA	1.705571794	4.38%	10
N013139-002B-DT 5X	Manganese	µg/L	74.00491706	PASS	70.70472492	4.67%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013139
Test Method: EPA 6020
Analysis Date: 8/11/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46286

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Mn. The calculated value is <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013139-024B-DT 5X	Arsenic	µg/L	2.957474363	PASS	2.981060409	0.79%	10
N013139-024B-DT 5X	Manganese	µg/L	0.982148496	NA	1.083209588	9.33%	10

Note: NA - Not applicable

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013139
Test Method: EPA 6020
Analysis Date: 8/12/2014

Dilution Test Summary


Matrix: Water
Batch No.: 46286

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments: _____ Analyzed By: Mary Claire Ignacio

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013139-024B-DT 5X 25x	Chromium	µg/L	390.2534904	PASS	389.7004807	0.14%	10

Note: NA - Not applicable

 8/21/2014
for

CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013139-002B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823356						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	32.758	1.0	10.00	23.08	96.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference


CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013139-024B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 94523						
Client ID: ZZZZZ	Batch ID: 46286	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/12/2014	SeqNo: 1823595						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	382.704	5.0	50.00	389.7	-14.0	80	120				S

DT @25x is within criteria

 8/21/2014

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013139-002B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46285	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823526						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.940	0.10	10.00	1.706	102	80	120				
Manganese	168.597	0.50	100.0	70.70	97.9	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

CLIENT: CH2M HILL
Work Order: N013139
Project: PGE Hinkley, 492581.UR.IR.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020WDAsMnHink

Sample ID: N013139-024B-PS	SampType: PS	TestCode: 6020WDAsM	Units: µg/L	Prep Date:	RunNo: 94519						
Client ID: ZZZZZ	Batch ID: 46286	TestNo: EPA 6020	EPA 3010A	Analysis Date: 8/11/2014	SeqNo: 1823551						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	13.347	0.10	10.00	2.981	104	80	120				
Manganese	99.170	0.50	100.0	1.083	98.1	80	120				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |

September 24, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013336

RE: PGE Hinkley, 492581.UR.AU.FW


Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 04, 2014 by ASSET Laboratories .
The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in
accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013336

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Samples were analyzed within method holding time.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.AU.FW
Lab Order: N013336
Contract No: 2014-ATU-062-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013336-001A	MW-89S-062-M09	Groundwater	9/4/2014 11:56:00 AM	9/4/2014	9/24/2014
N013336-001B	MW-89S-062-M09	Groundwater	9/4/2014 11:56:00 AM	9/4/2014	9/24/2014
N013336-002A	MW-105S-062-M09	Groundwater	9/4/2014 11:06:00 AM	9/4/2014	9/24/2014
N013336-002B	MW-105S-062-M09	Groundwater	9/4/2014 11:06:00 AM	9/4/2014	9/24/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 24-Sep-14

CLIENT: CH2M HILL
Lab Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013336-001

Client Sample ID: MW-89S-062-M09
Collection Date: 9/4/2014 11:56:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140905B	QC Batch: R94842				PrepDate		Analyst: RB
Hexavalent Chromium	3.0	0.016	0.20		µg/L	1	9/5/2014 03:52 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140923B	QC Batch: 46542				PrepDate	9/22/2014	Analyst: CEI
Chromium	3.1	0.030	1.0		µg/L	1	9/23/2014 09:27 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 24-Sep-14

CLIENT: CH2M HILL
Lab Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW
Lab ID: N013336-002

Client Sample ID: MW-105S-062-M09
Collection Date: 9/4/2014 11:06:00 AM
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140905B	QC Batch: R94842				PrepDate		Analyst: RB
Hexavalent Chromium	2.4	0.016	0.20		µg/L	1	9/5/2014 04:02 PM

DISSOLVED METALS BY ICP-MS

EPA 3010A

EPA 6020

RunID: ICP7_140923B	QC Batch: 46542				PrepDate	9/22/2014	Analyst: CEI
Chromium	2.4	0.030	1.0		µg/L	1	9/23/2014 09:33 PM

Qualifiers: B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate outside of limits due to matrix interference
 DO Surrogate Diluted Out
 E Value above quantitation range
 ND Not Detected at the Reporting Limit
 Results are wet unless otherwise specified



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CLIENT: CH2M HILL
Work Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94842	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842
Client ID: PBW	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833878
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-R94842	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842
Client ID: LCSW	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833879
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	5.000	0.20	5.000	0	100 90 110

Sample ID N013335-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842
Client ID: ZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833890
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	0.989	0.20			0.9893 0 20

Sample ID N013335-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842
Client ID: ZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833891
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	6.007	0.20	5.000	0.9893	100 90 110

Sample ID N013335-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842
Client ID: ZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833892
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	6.059	0.20	5.000	1.037	100 90 110

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013335-002A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833893						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.091	0.20	5.000	1.037	101	90	110	6.059	0.530	20	

Sample ID N013335-003A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833894						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.213	0.20	1.000	0.1401	107	90	110				

Sample ID N013335-004A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833895						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.997	0.20	5.000	3.076	98.4	90	110				

Sample ID N013335-005A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833896						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.187	0.20	1.000	0.1609	103	90	110				

Sample ID N013335-006A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6		Analysis Date: 9/5/2014	SeqNo: 1833897						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.886	0.20	5.000	1.005	97.6	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013336-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6	Analysis Date: 9/5/2014	SeqNo: 1833898							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.018	0.20	5.000	2.977	101	90	110				

Sample ID N013336-002A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94842						
Client ID: ZZZZZZ	Batch ID: R94842	TestNo: EPA 218.6	Analysis Date: 9/5/2014	SeqNo: 1833899							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.376	0.20	5.000	2.356	100	90	110				

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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CLIENT: CH2M HILL
Work Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID MB-46542	SampType: MBLK	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 9/22/2014	RunNo: 95001						
Client ID: PBW	Batch ID: 46542	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/23/2014	SeqNo: 1839452						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium ND 1.0

Sample ID LCS-46542	SampType: LCS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 9/22/2014	RunNo: 95001						
Client ID: LCSW	Batch ID: 46542	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/23/2014	SeqNo: 1839453						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 9.618 1.0 10.00 0 96.2 85 115

Sample ID N013335-001B-MS	SampType: MS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 9/22/2014	RunNo: 95001						
Client ID: ZZZZZZ	Batch ID: 46542	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/23/2014	SeqNo: 1839459						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.245 1.0 10.00 0.9077 93.4 75 125

Sample ID N013335-001B-MSD	SampType: MSD	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date: 9/22/2014	RunNo: 95001						
Client ID: ZZZZZZ	Batch ID: 46542	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/23/2014	SeqNo: 1839460						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chromium 10.261 1.0 10.00 0.9077 93.5 75 125 10.25 0.148 20

Qualifiers:

- | | | |
|---|--|--|
| B Analyte detected in the associated Method Blank | E Value above quantitation range | H Holding times for preparation or analysis exceeded |
| ND Not Detected at the Reporting Limit | R RPD outside accepted recovery limits | S Spike/Surrogate outside of limits due to matrix interference |
| DO Surrogate Diluted Out | Calculations are based on raw values | |



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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 9/4/2014 Workorder: N013336
 Rep sample Temp (Deg C): 3.8 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: ATL
 Last 4 digits of Tracking No.: NA Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| Was Client notified? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |

Comments

Checklist Completed B AC ACortes 09/05/2014

Reviewed By: fg 09/09/14

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013336-002A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 2.3556 * 1 \\ &= 2.3556\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 2.4$$

 9/15/2014

Sample Calculation

METHOD: EPA 6020

TEST NAME: Heavy Metals by ICP-MS

MATRIX: Aqueous

FORMULA:

Calculate the Chromium concentration, in ug/L, in the original sample as follows:

$$\text{Chromium, ug/L} = A * DF * PF$$

where:

A = ug/L, calculated concentration

DF = dilution factor


PF = Final Vol. of Digestate in mL / Vol. of Sample used in mL

For Sample **N013336-001B**, the concentration in ug/L is calculated as follows:

$$\begin{aligned} \text{Chromium, ug/L} &= 3.0684704248 * 1 * (25/25) \\ &= 3.0684704248 \end{aligned}$$

Reporting results in two significant figures,

$$\text{Chromium, ug/L} = 3.1$$

 9/24/2014

ASSET Laboratories

ICP-Metals in Water

Work Order No.: N013336
Test Method: EPA 6020
Analysis Date: 9/23/2014

Dilution Test Summary

Matrix: Water
Batch No.: 46542

Instrument ID: ICP-MS #2
Instrument Description: Agilent 7700x

Comments:

Analyzed By: Mary Claire Ignacio

Dilution test is not applicable to Cr. The calculated value is <25X RL. PS passed criteria.

Sample ID	Analyte	Units	Calc Val	OQual	SAMPRefVal	%DIFF	%DIFFlimit
N013335-001B-DT 5X	Chromium	µg/L	0.878524001	NA	0.907735955	3.22%	10

Note: NA - Not applicable

CLIENT: CH2M HILL
Work Order: N013336
Project: PGE Hinkley, 492581.UR.AU.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE

Sample ID: N013335-001B-PS	SampType: PS	TestCode: 6020DIS_CrP	Units: µg/L	Prep Date:	RunNo: 95001						
Client ID: ZZZZZ	Batch ID: 46542	TestNo: EPA 6020	EPA 3010A	Analysis Date: 9/23/2014	SeqNo: 1839458						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.182	1.0	10.00	0.9077	92.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

September 22, 2014

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-00922

Workorder No.: N013400

RE: PGE Hinkley, 492581.UR.SW.FW

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 17, 2014 by ASSET Laboratories .
The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in
accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Jose Tenorio Jr.
Laboratory Director

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CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013400

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Sample was analyzed within method holding time.

Subcontracted Analyses:

Dissolved Chromium by EPA 6020 was subcontracted to Truesdail-Tustin,CA.



CLIENT: CH2M HILL
Project: PGE Hinkley, 492581.UR.SW.FW
Lab Order: N013400
Contract No: 2014-GMP-062-

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N013400-001A	EX-36-062-M09	Water	9/15/2014 11:00:00 AM	9/17/2014	9/22/2014
N013400-001B	EX-36-062-M09	Water	9/15/2014 11:00:00 AM	9/17/2014	9/22/2014



ASSET Laboratories

ANALYTICAL RESULTS

Print Date: 22-Sep-14

CLIENT:	CH2M HILL	Client Sample ID:	EX-36-062-M09
Lab Order:	N013400	Collection Date:	9/15/2014 11:00:00 AM
Project:	PGE Hinkley, 492581.UR.SW.FW	Matrix:	WATER
Lab ID:	N013400-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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HEXAVALENT CHROMIUM BY IC

EPA 218.6

RunID: IC7_140917A	QC Batch: R94930	PrepDate	Analyst: RB
Hexavalent Chromium	1.6 0.016 0.20	µg/L	1 9/17/2014 12:31 PM

Qualifiers:	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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CLIENT: CH2M HILL
Work Order: N013400
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID MB-R94930	SampType: MBLK	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930
Client ID: PBW	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836743
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	ND	0.20			

Sample ID LCS-R94930	SampType: LCS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930
Client ID: LCSW	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836744
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	4.820	0.20	5.000	0	96.4 90 110

Sample ID N013399-001A-DUP	SampType: DUP	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930
Client ID: ZZZZZ	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836746
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	1.605	0.20			1.610 0.311 20

Sample ID N013399-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930
Client ID: ZZZZZ	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836747
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	6.460	0.20	5.000	1.610	97.0 90 110

Sample ID N013399-001A-MSD	SampType: MSD	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930
Client ID: ZZZZZ	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836748
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Hexavalent Chromium	6.458	0.20	5.000	1.610	96.9 90 110 6.460 0.0434 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference



CLIENT: CH2M HILL
Work Order: N013400
Project: PGE Hinkley, 492581.UR.SW.FW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID N013400-001A-MS	SampType: MS	TestCode: 218.6_WPGE	Units: µg/L	Prep Date:	RunNo: 94930						
Client ID: ZZZZZZ	Batch ID: R94930	TestNo: EPA 218.6		Analysis Date: 9/17/2014	SeqNo: 1836750						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	6.492	0.20	5.000	1.571	98.4	90	110				

Qualifiers:

- | | | | | | |
|----|---|---|--------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |



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ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.


If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.


Cooler Received/Opened On: 9/17/2014 Workorder: N013400
 Rep sample Temp (Deg C): 6.3 IR Gun ID: 2
 Temp Blank: Yes No
 Carrier name: FedEx
 Last 4 digits of Tracking No.: 3890 Packing Material Used: None
 Cooling process: Ice Ice Pack Dry Ice Other None

Sample Receipt Checklist

- | | | | |
|---|--|--|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact, signed, dated on shipping container/cooler? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Sampler's name present in COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | NA <input type="checkbox"/> |
| 13. Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/> |
| 14. Water - pH acceptable upon receipt?
Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 15. Did the bottle labels indicate correct preservatives used? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| 16. Were there Non-Conformance issues at login?
Was Client notified? | Yes <input checked="" type="checkbox"/>
Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>
No <input type="checkbox"/> | NA <input type="checkbox"/>
NA <input type="checkbox"/> |

Comments All of the ice were melted upon receipt.

Checklist Completed B AC  9/17/14

Reviewed By:  9/22/2014

Sample Control

From: Shawn.Duffy@CH2M.com
Sent: Wednesday, September 17, 2014 1:17 PM
To: samplecontrol.lv@assetlaboratories.com
Cc: marlon@assetlaboratories.com
Subject: RE: 2014-GMP-062-M09

Yes please. The current temperature requirement for most analysis is $\leq 6^{\circ}\text{C}$ and 6.3 rounds to 6.

Shawn

From: SampleControl.LV@assetlaboratories.com [<mailto:samplecontrol.lv@assetlaboratories.com>]
Sent: Wednesday, September 17, 2014 12:43 PM
To: Duffy, Shawn/RDD
Cc: 'Marlon B. Cartin'
Subject: 2014-GMP-062-M09

Hello Shawn,

Attached is the SRCs and the COCs of the samples for 2014-GMP-062-M09. The temperature of the samples upon receipt is at 6.3°C. Please advise if you like us to proceed.

Thank you.

John



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California: 11060 Artesia Blvd., Ste. C, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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Thank you.

Sample Control

From: Marlon B. Cartin [marlon@assetlaboratories.com]
Sent: Thursday, September 18, 2014 4:21 PM
To: 'Sean Condon'
Cc: 'Sample Control'
Subject: RE: N013399 / N013400 COCs

Hi Sean!

Changes. Please report N013400 on a standard TAT. No more rush on that one.

Thanks,

Marlon B. Cartin

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118

P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

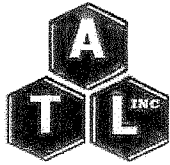
From: Sean Condon [<mailto:scondon@truesdail.com>]
Sent: Thursday, September 18, 2014 12:31 PM
To: marlon@atl-labs.com
Subject: N013399 / N013400 COCs

Marlon,

Attached are the COCs for samples N013399 and N013400.

Do you have a CH2M Hill project name and/or number you would like to appear on the report or just use ATL info?

Thank you,
Sean Condon
Project Manager
Truesdail Laboratories, Inc.
14201 Franklin Ave.
Tustin, CA 92780
(714 730-6239



ASSET Laboratories

3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 FAX: 7023072691

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Truesdail
14201 Franklin Ave.
Tustin, CA 92680

TEL: (714) 730-6239
FAX: (714) 730-6462
Acct #:

Field Sampler: LL Begley

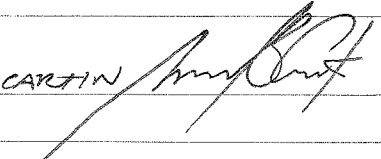
17-Sep-14

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				EPA 6020		
N013400-001B / EX-36-062-M09	Water	9/15/2014 11:00:00 AM	16OZP	1		

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: ~~N013400~~ For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 2 Day TAT N13400A

Please analyze for Dissolved Cr by 6020.

Relinquished by: <u>MRS CARTER</u> 	Date/Time: <u>9/17/14 @ 1000</u>	Received by: _____	Date/Time: _____
Relinquished by: _____	_____	Received by: _____	_____

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in $\mu\text{g/L}$, in the original sample as follows:

$$\text{Cr}^{+6}, \mu\text{g/L} = A * \text{DF}$$

where:


A = $\mu\text{g/L}$, IC Cr^{+6} calculated concentration
DF = dilution factor

For **N013400-001A** concentration in $\mu\text{g/L}$ is calculated as follows:

$$\begin{aligned}\text{Cr}^{+6}, \mu\text{g/L} &= 1.571 * 1 \\ &= 1.571\end{aligned}$$

Reporting result in two significant figures,

$$\text{Cr}^{+6}, \mu\text{g/L} = 1.6$$

 9/19/2014

TRUESDAIL LABORATORIES, INC.

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TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

September 22, 2014

ASSET Laboratories

Mr. Marlon Cartin
3151 W Post Road
Las Vegas, NV 89118

Dear Mr. Cartin:

SUBJECT: CASE NARRATIVE;
TLI NO.: 815044

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Total Dissolved Chromium results. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, wet chemistry raw data, quality control data and chain of custody forms are included in Sections 3 and 4.

The samples were received and delivered with the chain of custody on September 18, 2014, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter they will either be disposed or kept in warm storage for an additional 2 months.

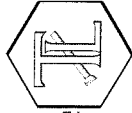
The sample was analyzed and recorded in the raw data as SDG 14I0280 but is reported as SDG 815044 in all final report pages.

No violations or nonconformance actions occurred for this data package. If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi,
Manager Analytical Services

Michael Ngo
Quality Assurance/Quality Control Officer



Client: ASSET Laboratories
3151 W Post Road
Las Vegas, NV 89118
Attention: Marlon Cartin

14201 FRANKLIN AVENUE · TUSTIN, CALIFORNIA 92780-7008
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Laboratory No.: 815044
Date Received: September 18, 2014

Project No.: 492581.JR.SW.FW
P.O. No.: N13400A

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
815044-001	EX-36-062-M09	SW6020	FLDFLT	9/15/2014	11:00	Chromium	2.1	ug/L	1.0

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01 ppm will have two (2) significant figures.

Result above or equal to 0.01 ppm will have three (3) significant figures.

Quality Control data will always have three (3) significant figures.

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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REPORT

Client: ASSET Laboratories

3151 W Post Road
Las Vegas, NV 89118

Attention: Marlon Cartin

Project Name: PG&E Topock Project

Project Number: 492581.UR.SW.FW

P.O. Number: N13400A

Number:

Laboratory No. 815044

Page 1 of 2

Printed 9/22/2014

Samples Received on 9/18/2014 8:06:00 AM

Field ID	Lab ID	Collected	Matrix
EX-36-062-M09	815044-001	09/15/2014 11:00	Water

Metals by EPA 6020A, Dissolved

Batch 091914A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
815044-001 Chromium	ug/L	09/19/2014 15:27	1.00	0.0710	1.0	2.1

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND

Duplicate

Lab ID = 815044-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	1.00	2.11	2.11	0.0948	0 - 20

Low Level Calibration Verification

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	0.216	0.200	108	70 - 130

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.7	85 - 115

Matrix Spike

Lab ID = 815044-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.2	52.1(50.0)	98.2	75 - 125

Matrix Spike Duplicate

Lab ID = 815044-001

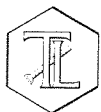
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.2	52.1(50.0)	98.3	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	21.4	20.0	107	90 - 110

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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TRUESDAIL LABORATORIES, INC.

Report Continued

Client: ASSET Laboratories

Project Name: PG&E Hinkley Project

Page 2 of 2

Project Number: 492581.UR.SW.FW

Printed 9/22/2014

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	20.6	20.0	103	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	21.1	20.0	106	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		

Interference Check Standard AB


Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	19.9	20.0	99.6	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	20.5	20.0	102	80 - 120

Respectfully submitted,

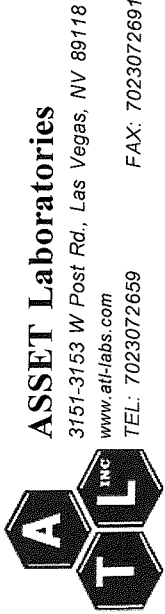
TRUESDAIL LABORATORIES, INC.


 Mona Nassimi
 Manager, Analytical Services

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815044 / 14I 0180

CHAIN-OF-CUSTODY RECORD



QC Level: Level IV

Subcontractor:

Truesdail
 14201 Franklin Ave.
 Tustin, CA 92680

TEL: (714) 730-6239
 FAX: (714) 730-6462
 Acct #:

Field Sampler: LL Begley

17-Sep-14

Sample ID	Matrix	Date Collected	Bottle Type	EPA 6020	Requested Tests
N013400-001B / EX-36-062-M09	Water	9/15/2014 11:00:00 AM	16OZP	1	PM = 2

**ALERT!!
Level IV QC**

RUSH

General Comments: Please email sample receipt acknowledgement to the PM.

Please use PO#: N043400 For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: 2 Day TAT N13400A

Please analyze for Dissolved Cr by 6020.

Relinquished by: <i>MS CARTER</i>	Date/Time: 9/17/14 10:00
Relinquished by: <i>[Signature]</i>	Date/Time: 9-18-14 08:06
Received by: <i>[Signature]</i>	Date/Time: 9-18-14 08:06
Received by:	Date/Time:



Turbidity/pH Check

Sample Number	Turbidity	pH	Date	Analyst	Need Digest (Y/N)	Time of Adjustment to pH 2	Date/Time of 2nd pH check	Comments
14I0168(10-12)	<1	72	9/12/14	ES	NO	3:00		
14I0169(01-02)	↓	↓	↓	↓	↓	↓		
14I0170(01-07)	↓	↓	↓	↓	↓	↓		
14I0173(01-09)	↓	↓	↓	↓	↓	↓		
14I0164(01-04)	↓	↓	↓	↓	↓	↓		
14I0143-01	<1	72	9/15/14	ES	yes	3:00		pH 72
14I0161(01-02)	>1	72	↓	↓	yes	↓		
14I0176-01	↓	↓	↓	↓	↓	↓		
14I0190-02	↓	↓	↓	↓	↓	↓		
14I0191-02	<1	↓	↓	↓	↓	↓		
14I0194-01	↓	↓	↓	↓	↓	↓		
14I0195-01	↓	↓	↓	↓	↓	↓		
14I0227-01	>1	72	9/17/14	ES	yes	↓		
14I0209-01	<1	72	↓	↓	↓	↓		
14I0211(01-02)	>1	↓	↓	↓	↓	↓		
14I0217-01	↓	↓	↓	↓	↓	↓		
14I0223(02,04)	<1	↓	↓	↓	↓	↓		
14I0230-02	↓	↓	↓	↓	↓	↓		
14I0231-02	↓	↓	↓	↓	↓	↓		
14I0232-02	↓	↓	↓	↓	↓	↓		
14I0233-02	↓	↓	↓	↓	↓	↓		
14I0228(01-02,04)	<1	72	9/17/14	ES	yes No	12:00	9/18/14 10:00	pH 72
14I0236(01-05,76)	↓	↓	↓	↓	↓	↓		
14I0228(01-12,14)	↓	↓	↓	↓	↓	↓		
14I0258-01)	↓	↓	↓	↓	↓	↓		
14I0253(01-03)	↓	↓	↓	↓	↓	↓		
14I0255(10-12)	↓	↓	↓	↓	↓	↓		
14I0264-01	<1	72	9/18/14	ES	yes	↓		
14I0257-01	>1	↓	↓	↓	↓	↓		
14I0266-01-02	↓	↓	↓	↓	↓	↓		
14I0267-02	<1	↓	↓	↓	↓	↓		
14I0143-01	<1	72	9/18/14	ES	yes	10:00		pH 72
14I0238-01	↓	↓	↓	↓	↓	↓		
14I0280-01	↓	72	↓	↓	↓	↓		
14I0281-01	↓	↓	↓	↓	↓	↓		
14I0303-01	<1	72	9/22/14	ES	↓	↓		
14I0308-01	↓	72	↓	↓	↓	↓		
14I0311-01	>1	72	↓	↓	↓	↓		
14I0312-01	<1	↓	↓	↓	↓	↓		
14I0313-01	↓	↓	↓	↓	↓	↓		

Notes:

1. Samples should be analyzed after 24 hrs of pH adjustment to pH2 for Dissolved Analytes.
2. All Total Recoverable Analytes must be pH adjusted and digested.
3. Do not use disposable pipette to measure pH; pour a little amount of sample from the bottle.

Appendix D
Historical Groundwater Analytical Data for ATU
Supply Wells and Irrigation Water

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
Extraction Wells in OU2									
C-01	05/11/11		ND (0.2)	ND (1.0)	39.4	3,520	---	---	---
	06/06/11		3.0	3.0	13.4	1,310	---	---	---
	07/21/11		2.8	2.8	13.9	1,360	---	---	---
	09/06/11		2.7	2.6	12.2	1,230	---	---	---
	10/25/11		2.8	2.9	12.0	1,300	---	---	---
	11/22/11		2.9	2.9	9.54	1,060	---	---	---
	12/21/11		1.7	2.0	45.6	3,740	---	---	---
	01/27/12		2.8	3.0	11.5	1,220	51.0	6.08	---
	04/18/12		5.1	5.2	11.5	1,080	---	---	---
	07/09/12		6.8	6.4	11.2	1,220	---	---	---
	10/11/12		5.4	5.5	9.95	1,190	---	---	---
	01/28/13		2.7	3.2	32.3	3,840	---	---	---
	04/01/13		6.8	6.4	12.8	1,520	---	---	---
	07/08/13		6.7	7.4	11.6	1,480	---	---	---
	10/09/13		5.6	5.6	10.6	1,320	---	---	---
	10/09/13	FD	5.6	5.3	10.4	1,330	---	---	---
	01/08/14		5.2	5.7	10.9	1,240	---	---	---
04/10/14		6.7	7.6	11.0	1,300	46.0	10.1J	36.0	
07/16/14		7.0	6.4	11.0	1,300	40.4	5.82	37.0	
C-02	06/06/11		11.5	11.6	19.3	1,470	---	---	---
	07/21/11		12.0	12.6	20.0	1,400	---	---	---
	09/06/11		12.7	12.0	20.7	1,420	---	---	---
	10/25/11		14.7	14.0	19.9	1,450	---	---	---
	11/22/11		12.2	13.0	20.1	1,330	---	---	---
	12/21/11		2.5	4.7	17.8	1,480	---	---	---
	01/27/12		10.4	11.3	21.2	1,410	39.6	6.02	---
	04/19/12		12.6	14.0	19.0	1,290	---	---	---
	07/09/12		12.4	12.0	19.9	1,380	---	---	---
	10/11/12		11.9	12.1	20.6	1,430	---	---	---
10/11/12	FD	12.0	11.5	19.6	1,380	---	---	---	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
C-02	01/16/13		10.1	11.6	18.9	1,420	---	---	---
	04/01/13		9.5	11.0	19.2	1,710	---	---	---
	07/08/13		7.6	8.0	24.4	1,300J	---	---	---
	07/08/13	FD	7.6	8.3	24.6	2,150J	---	---	---
	10/09/13		7.2	7.7	26.0	2,120	---	---	---
	01/08/14		8.5	8.0	23.3	1,860	---	---	---
	04/10/14		8.7	8.8	23.0	1,900	43.2	12.7J	35.0
	07/16/14		8.1	7.6	23.0	1,900	51.4	4.48	38.0
C-03	05/09/11		ND (0.2)	ND (1.0)	52.5	1,230	---	---	---
	06/06/11		10.5	11.6	18.5	1,420	---	---	---
	07/21/11		11.3	12.3	18.8	1,470	---	---	---
	07/21/11	FD	11.0	12.1	19.6	1,450	---	---	---
	09/06/11		9.7	10.3	19.7	1,540	---	---	---
	10/25/11		12.8	11.9	20.6	1,590	---	---	---
	11/22/11		8.5J	11.1	21.7	1,330	---	---	---
	11/22/11	FD	5.5J	10.6	19.0	1,520	---	---	---
	12/21/11		10.2	11.8	21.5	1,380	---	---	---
	01/27/12		11.0	12.3	18.8	1,560	47.6	4.10	---
	04/19/12		9.4	10.7	19.7	1,660	---	---	---
	04/19/12	FD	9.3	10.4	18.4	1,600	---	---	---
	07/09/12		7.4	7.4	18.3	1,980	---	---	---
	10/11/12		6.5	6.5	18.4	2,150	---	---	---
	01/16/13		4.9	5.2	21.1	2,390	---	---	---
	01/16/13	FD	4.9	5.1	20.9	2,510	---	---	---
	04/01/13		3.1	3.2	30.9	2,780	---	---	---
	07/08/13		3.0	3.4	32.1	2,920	---	---	---
	10/09/13		2.7	2.6	37.6	2,970	---	---	---
	01/08/14		2.9	3.0	45.2	3,030	---	---	---
04/10/14		3.1	3.4	41.0	3,200	59.8	15.2J	56.0	
07/16/14		2.9	2.7	45.0	3,500	43.4	7.17	52.0	
C-04	05/11/11		0.3	ND (1.0)	6.94	551	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
C-04	06/06/11		2.6	2.9	7.92	766	---	---	---
	07/21/11		2.7	2.5	8.33	842	---	---	---
	09/06/11		3.3	3.5	8.42	824	---	---	---
	10/25/11		3.4	3.8	8.46	894	---	---	---
	11/22/11		3.1	3.3	7.85	816	---	---	---
	12/21/11		0.69	ND (1.0)	2.26	532	---	---	---
	01/27/12		3.4	3.7	7.90	878	46.4	ND (4.00)	---
	01/27/12	FD	3.4	3.7	7.70	870	48.2	8.86	---
	04/19/12		4.1	4.9	8.61	818	---	---	---
	07/09/12		5.4	5.2	8.96	922	---	---	---
	07/09/12	FD	5.4	5.2	9.25	926	---	---	---
	10/11/12		4.0	4.3	8.52	898	---	---	---
	01/16/13		6.6	6.7	9.24	898	---	---	---
	04/01/13		6.2	6.0	9.34	896	---	---	---
	04/01/13	FD	6.3	5.9	9.34	904	---	---	---
	07/08/13		6.5	6.8	8.52	916	---	---	---
	10/09/13		6.6	6.5	9.43	950	---	---	---
	01/08/14		5.2	5.4	9.65	946	---	---	---
	04/10/14		7.9	7.6	9.30	960	39.4	5.63J	32.0
	07/16/14		7.3	6.3	10.0	960	66.1	ND (6.27)	33.0
07/16/14	FD	7.3	6.5	10.0	950	45.1	4.98	32.0	
EX-01	03/23/04		37.0	39.0	8.19	883	---	---	---
	04/29/04		29.0	31.6	---	---	---	---	---
	08/31/04		64.7	62.7	---	---	---	---	---
	09/13/04		84.2	86.9	7.41	880	---	---	---
	09/29/04		66.6	64.3	9.07	956	---	---	---
	10/11/04		56.2	56.6	9.66	958	---	---	---
	10/28/04		32.1	33.0	8.37	906	---	---	---
	11/09/04		47.8	51.0	9.51	951	---	---	---
	11/22/04		53.3	56.9	8.87	948	---	---	---
	12/09/04		36.3	38.4	9.44	992	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-01	12/20/04		37.9	39.7	10.2	992	---	---	---
	01/13/05		40.9	42.7	9.96	959	---	---	---
	02/02/05		27.7	29.7	9.77	952	---	---	---
	02/15/05		27.5	31.5	9.99	1,010	---	---	---
	03/09/05		28.5	30.6	10.1	1,000	---	---	---
	04/11/05		25.9	25.6	10.7	1,010	---	---	---
	05/04/05		24.4	22.8	10.9	1,020	---	---	---
	06/07/05		23.7	25.7	10.7	1,040	---	---	---
	07/14/05		20.6	21.4J	11.0	1,110	---	---	---
	08/15/05		17.8	20.7	10.9	1,080	---	---	---
	09/27/05		19.1	15.9	11.6	1,090	---	---	---
	10/10/05		17.1	17.5	11.5	1,080	---	---	---
	11/07/05		20.0	20.8	11.3	1,010	---	---	---
	12/08/05		18.0	18.8	11.7	1,110	---	---	---
	01/25/06		18.1	16.4	11.7	1,090J	---	---	---
	02/16/06		19.6	19.8	12.0	1,060	---	---	---
	04/18/06		15.8	19.4	11.8	1,090	---	---	---
	06/12/06		16.6	22.1	12.6	1,140	---	---	---
	08/09/06		17.5	14.9	12.4	1,130	---	---	---
	10/19/06		17.8	17.0	12.3	1,420	---	---	---
	12/06/06		18.8	16.2	12.4	1,110	---	---	---
	02/13/07		19.8	19.0	11.9	1,100	---	---	---
	04/10/07		18.2	24.1	12.2	1,160	---	---	---
	08/13/07		17.7	20.7	12.1	1,090	---	---	---
	12/05/07		19.9	21.0	11.7	1,090	---	---	---
	02/14/08		19.7	19.4	11.8	1,040	---	---	---
	04/07/08		19.6	20.2	12.2	1,100	---	---	---
	06/04/08		15.6	18.2	12.2	1,090	---	---	---
	08/07/08		16.6J	16.4	11.9	1,070	---	---	---
	10/07/08		---	---	12.0	1,200	---	---	---
	11/05/08		15.2	13.3	12.6	1,120	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-01	02/04/09		18.6	18.6	12.1	1,150	---	---	---
	05/12/09		19.2	16.5	12.0	1,070	---	---	---
	08/12/09		17.2	17.2	12.6	1,120	---	---	---
	11/10/09		15.5	16.6	12.7	1,160	---	---	---
	02/09/10		15.8	15.7	12.5	1,180	---	---	---
	05/12/10		15.0	16.6	12.1	1,070	---	---	---
	08/19/10		16.2	15.1	12.4	1,130	---	---	---
	10/28/10		13.7	14.7	11.8	1,340	---	---	---
	01/27/11		16.5	14.5	12.6	1,100	---	---	---
	05/02/11		14.4	14.8	14.1	1,180	---	---	---
	07/28/11		11.8	13.6	13.6	1,200	---	---	---
	10/26/11		14.1J	11.3J	16.1	1,230	---	---	---
	01/12/12		12.1	14.6	12.6	1,040	---	---	---
	04/09/12		11.0	10.7	15.4	1,210	---	---	---
	07/11/12		10.9	10.6	14.9	1,280	---	---	---
	10/16/12		10.6	11.0	15.1	1,290	---	---	---
	01/18/13		8.8	8.7	14.6	1,320	---	---	---
	01/18/13	FD	8.8	8.3	14.5	1,300	---	---	---
	04/11/13		7.0	7.4	15.2	1,330	---	---	---
	07/03/13		6.4	6.3	15.0	1,420	---	---	---
10/09/13		6.9	6.6	15.3	1,320	---	---	---	
10/09/13	FD	6.8	6.6	15.0	1,330	---	---	---	
01/08/14		6.6	7.3	16.9	1,340	---	---	---	
04/10/14		12.0	10.0	---	---	82.8	12.8J	50.0	
07/16/14		8.9	8.2	---	---	76.6	8.61	54.0	
EX-02	04/09/04		0.75J	1.4	20.8	4,160J	---	---	---
	04/29/04		0.92	2.4	---	---	---	---	---
	09/29/04		5.4	5.5	20.6	3,590	---	---	---
	10/11/04		4.8	5.9	19.3	3,560	---	---	---
	10/28/04		1.6	2.8	19.4	3,770	---	---	---
	11/09/04		9.6	23.6	11.1	1,920	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-02	11/22/04		3.7	5.2	19.6	3,650	---	---	---
	12/09/04		2.2	3.1	13.4	3,120	---	---	---
	12/20/04		5.1	5.5	18.6	3,500	---	---	---
	01/13/05		6.2	7.4	18.5	3,290	---	---	---
	02/02/05		12.3	13.1	16.7	2,240	---	---	---
	02/15/05		12.9	15.4	17.2	2,620	---	---	---
	03/09/05		13.0	17.6	16.8	2,520	---	---	---
	04/11/05		13.8	14.7	17.2	2,460	---	---	---
	05/04/05		14.4	14.1	17.2	2,350	---	---	---
	06/07/05		14.7	16.9	16.6	2,550	---	---	---
	07/14/05		13.1	15.0J	17.1	2,560	---	---	---
	08/15/05		13.0	15.0	16.8	2,560	---	---	---
	09/27/05		13.4	11.3	17.2	2,520	---	---	---
	10/10/05		13.7	11.3	17.1	2,510	---	---	---
	11/07/05		11.5	12.4	17.2	2,510	---	---	---
	12/08/05		14.1	13.2	19.5	2,360	---	---	---
	01/25/06		14.0	12.0	17.1	2,370	---	---	---
	02/16/06		15.1	15.0	17.9	2,300	---	---	---
	04/18/06		14.6	18.0	16.4	2,140	---	---	---
	10/19/06		16.1	14.1	18.3	2,300	---	---	---
	12/06/06		15.0	12.6	18.1	2,200	---	---	---
	02/13/07		16.5	15.0	17.0	2,170	---	---	---
	04/10/07		14.9	18.6	16.6	2,100	---	---	---
	08/13/07		12.4	12.7	15.8	1,870	---	---	---
	12/05/07		9.0	8.8	15.2	1,770	---	---	---
	02/14/08		9.5	10.5	15.2	1,690	---	---	---
	04/07/08		9.6	10.0	15.3	1,640	---	---	---
	06/04/08		11.1	11.8	14.3	1,740	---	---	---
	08/07/08		11.3	11.4	14.8	1,740	---	---	---
	10/07/08		---	---	14.7	1,700	---	---	---
	11/05/08		11.8	10.3	14.8	1,740	---	---	---

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-02	02/04/09		11.1	9.9	15.4	1,790	---	---	---
	02/04/09	FD	11.2	9.2	15.2	1,720	---	---	---
	05/12/09		10.4	9.5	14.0	1,720	---	---	---
	08/12/09		11.4	11.7	15.2	1,610	---	---	---
	11/10/09		11.6	12.4	15.1	1,670	---	---	---
	02/09/10		10.2	10.0	14.7	1,460	---	---	---
	05/12/10		9.8	10.7	14.8	1,530	---	---	---
	08/19/10		11.6	11.2	15.2	1,610	---	---	---
	10/28/10		10.0	10.3	15.1	1,610	---	---	---
	01/27/11		10.1	10.3	14.8	1,390	---	---	---
	05/02/11		10.1	10.7	17.0	1,610	---	---	---
	07/28/11		12.0	12.4	16.6	1,570	---	---	---
	07/28/11	FD	11.8	12.9	17.6	1,520	---	---	---
	10/26/11		14.2	12.5	16.4	1,630	---	---	---
	01/12/12		12.5	13.2	16.6	1,480	---	---	---
	04/09/12		10.6	11.3	16.5	1,270	---	---	---
	07/11/12		12.6	12.2	17.1	1,580	---	---	---
	10/16/12		12.7	13.0	16.4	1,690	---	---	---
	01/18/13		14.2	14.6	17.4	1,690	---	---	---
	04/11/13		14.4	16.3	16.4	1,920	---	---	---
07/03/13		10.0	10.1	13.9	1,700	---	---	---	
10/09/13		21.3	19.5	15.0	1,700	---	---	---	
01/08/14		16.4	17.3	16.9	1,760	---	---	---	
07/16/14		20.0	18.0	---	---	74.9	4.19	53.0	
EX-03	01/26/06		1.4J	7.4J	14.6	2,050	---	---	---
	02/21/06		ND (0.2)	1.3	18.1	2,380	---	---	---
	06/21/07		34.0	30.9	17.2	1,810	---	---	---
	08/13/07		31.9	32.8	17.2	1,840	---	---	---
	12/05/07		30.9	32.0	17.1	1,950	---	---	---
	12/05/07	FD	31.0	31.9	17.1	1,960	---	---	---
	02/14/08		27.7	27.2	16.7	1,840	---	---	---

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-03	04/07/08		17.4	20.4	16.6	1,870	---	---	---
	06/04/08		28.9	29.0	17.2	1,890	---	---	---
	08/07/08		27.8	28.1	15.7	1,770	---	---	---
	10/07/08		---	---	16.1	1,800	---	---	---
	11/05/08		28.1	25.3	16.6	1,810	---	---	---
	02/04/09		26.5	22.6	17.5	1,890	---	---	---
	05/12/09		26.1	25.6	15.3	1,710	---	---	---
	11/10/09		27.2	27.9	15.2	1,640	---	---	---
	02/09/10		23.1	22.8	25.6	1,760	---	---	---
	05/12/10		23.3	25.3	16.2	1,670	---	---	---
	08/19/10		26.9	25.9	3.46	1,670	---	---	---
	10/28/10		22.3	24.2	17.4	1,800	---	---	---
	01/27/11		25.4	22.3	18.2	1,830	---	---	---
	05/02/11		24.7	25.6	21.6	1,890	---	---	---
	07/28/11		28.2	29.7	20.5	1,660	---	---	---
	10/26/11		14.0	25.7	20.9	2,040	---	---	---
	01/12/12		20.2	22.6	20.4	2,090	---	---	---
	04/10/12		21.0	22.7	20.5	2,170	---	---	---
	07/11/12		17.8	17.3	21.1	2,490	---	---	---
	10/16/12		14.3	15.0	25.3	2,800	---	---	---
	01/18/13		1.6	2.3	19.5	3,560	---	---	---
	04/11/13		0.22	ND (1.0)	17.9	3,090	---	---	---
	07/03/13		7.1	7.1	15.8	3,070	---	---	---
	07/03/13	FD	7.1	7.0	15.7	3,120	---	---	---
10/09/13		6.6	6.2	15.6	2,860	---	---	---	
03/06/14		4.4	3.9	12.0	3,100	---	---	---	
04/10/14		5.6	5.3	---	---	46.4JS	47.9J	77.0	
07/16/14		4.9	4.2	---	---	78.0	9.28	83.0	
07/16/14	FD	4.8	4.4	---	---	94.0	ND (6.36)	85.0	
EX-04	01/26/06		ND (0.2)	ND (1.0)	13.0	2,300	---	---	---
	02/21/06		ND (0.2)	4.6	17.8	2,330	---	---	---

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-04	06/21/07		24.5	23.0	17.6	2,700	---	---	---
	08/13/07		ND (0.2)	ND (1.0)	13.3	2,800	---	---	---
	12/05/07		22.8	19.5	17.4	2,820	---	---	---
	02/14/08		23.2	24.6	17.4	2,740	---	---	---
	02/14/08	FD	23.5	24.7	17.2	2,720	---	---	---
	04/07/08		23.5	25.5	17.6	3,300	---	---	---
	06/04/08		24.6	27.5	17.4	3,050	---	---	---
	08/07/08		21.4	20.4	17.5	3,390	---	---	---
	10/06/08		---	---	17.0	4,200	---	---	---
	11/05/08		20.7	18.3	17.8	2,940	---	---	---
	02/04/09		2.6	5.1	21.1	6,070	---	---	---
	05/12/09		22.6	22.3	19.7	3,740	---	---	---
	08/12/09		16.8	16.4	24.1	4,240	---	---	---
	11/10/09		18.8	19.5	23.4	4,200	---	---	---
	02/09/10		21.0	21.5	19.4	3,280	---	---	---
	02/09/10	FD	21.8	21.5	22.2	3,420	---	---	---
	05/12/10		23.2	22.5	21.6	3,140	---	---	---
	08/19/10		18.7	19.8	23.9	3,140	---	---	---
	10/28/10		16.1	17.1	21.9	3,160	---	---	---
	01/27/11		21.7	20.5	24.0	3,040	---	---	---
	05/02/11		10.4	16.4	25.8	3,540	---	---	---
	06/01/11		11.4	13.8	---	---	---	---	---
	07/28/11		7.1	11.7	28.5	3,980	---	---	---
	11/02/11		4.2	5.6	6.46	4,780	---	---	---
	01/12/12		ND (1.0)	1.3	32.5	5,830	---	---	---
	04/30/12		4.8	5.4	21.2	4,920	---	---	---
07/11/12		3.7	4.9	20.8	4,690	---	---	---	
10/16/12		3.9	5.1	19.8	4,400	---	---	---	
05/06/13		ND (0.2)	ND (1.0)	4.68	4,480	---	---	---	
07/03/13		2.3	2.7	11.4	4,400	---	---	---	
10/09/13		2.1	3.5	13.4	3,760	---	---	---	

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-04	01/08/14		1.6	3.4	14.8	3,860	---	---	---
	01/08/14	FD	1.5	3.4	14.6	3,840	---	---	---
	04/10/14		1.8	1.8	---	---	55.6JS	26.2J	110
	07/16/14		2.1	1.9	---	---	92.4J	ND (9.16)	120
EX-09	09/05/06		0.55	ND (1.0)	---	---	---	---	---
	09/05/06	FD	0.59	ND (1.0)	---	---	---	---	---
	12/14/06		0.26	ND (1.0)	0.914	512	---	---	---
	02/14/07		ND (0.2)	ND (1.0)	---	---	---	---	---
	04/10/07		0.29	ND (1.0)	---	---	---	---	---
	06/18/07		ND (0.2)	ND (1.0)	---	---	---	---	---
	08/17/07		0.3	ND (1.0)	---	---	---	---	---
	02/13/08		2.8	4.1	---	---	---	---	---
	04/10/08		0.51	ND (1.0)	---	---	---	---	---
	06/10/08		ND (0.2)	ND (1.0)	1.63	535	---	---	---
	08/11/08		0.22	ND (1.0)	---	---	---	---	---
	02/05/09		ND (0.2)	ND (1.0)	---	---	---	---	---
	05/13/09		0.67	ND (1.0)	2.38	583	---	---	---
	08/05/09		0.92	1.1	---	---	---	---	---
	11/16/09		ND (0.2)	ND (1.0)	---	---	---	---	---
	02/16/10		ND (0.2)	ND (1.0)	---	---	---	---	---
	10/05/10		0.78	1.1	---	---	---	---	---
	10/28/10		0.52	1.2	---	---	---	---	---
	01/27/11		0.28	ND (1.0)	---	---	---	---	---
	05/02/11		0.83	1.3	---	---	---	---	---
07/14/11		2.7	2.4	12.6	750	---	---	---	
08/02/11		2.3	2.3	9.92	686	---	---	---	
08/17/11		2.4	2.0	9.82	652	---	---	---	
09/12/11		2.6	2.2	9.58	636	---	---	---	
10/26/11		2.6	2.2	11.0	740	---	---	---	
11/22/11		2.3	2.4	11.5	660	---	---	---	
01/12/12		ND (0.06)	ND (1.0)	7.57	526	---	---	---	

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-09	03/09/12		0.72	ND (1.0)	---	---	---	---	---
	07/11/12		1.6	1.7	25.7	804	---	---	---
	10/16/12		1.5	1.6	11.0	584	---	---	---
	10/16/12	FD	1.5	1.5	11.3	599	---	---	---
	05/06/13		ND (0.2)	ND (1.0)	6.33	548	---	---	---
	07/03/13		1.1	1.1	5.25	446	---	---	---
	10/09/13		1.1	1.2	5.92	411	---	---	---
	01/08/14		1.0	1.2	5.19	430	---	---	---
	04/15/14		ND (0.06)	ND (1.0)	---	---	7.07	ND (4.00)	5.50
	04/15/14	FD	ND (0.06)	ND (1.0)	---	---	11.2	ND (4.00)	5.90
	07/25/14		ND (0.06)	ND (1.0)	---	---	6.99	ND (4.00)	4.40
EX-23	09/15/10		6.0	5.2	31.0	3,400	---	---	---
	10/28/10		5.7	5.3	29.4	3,220	---	---	---
	01/27/11		5.8	5.8	30.6	3,140	---	---	---
	05/02/11		4.8	5.5	31.1	3,220J	---	---	---
	07/28/11		4.5	4.8	30.0	3,200	---	---	---
	08/18/11		4.6	4.9	27.1	3,240	---	---	---
	10/26/11		4.5	4.1	27.1	3,140	---	---	---
	01/12/12		2.0	2.0	25.8	3,540	---	---	---
	06/28/12		4.6	4.7	17.5	2,980	---	---	---
	07/11/12		4.2	4.0	18.7	2,980	---	---	---
	10/16/12		3.8	3.7	18.9	2,960	---	---	---
	05/06/13		0.94	1.6	10.2	3,310	---	---	---
	07/03/13		2.4	2.2	10.5	3,230	---	---	---
	10/09/13		2.7	2.8	14.5	3,010	---	---	---
	01/08/14		2.0	2.2	9.25	3,130	---	---	---
04/10/14		---	---	---	---	49.1JS	24.5J	110	
07/16/14		2.7	---	---	---	131	13.5	110	
EX-24	09/15/10		1.6	1.2	98.2	4,060	---	---	---
	10/28/10		2.5	2.1	61.5J	4,040	---	---	---
	01/27/11		2.9	2.7	55.3	3,540	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-24	05/02/11		2.3	3.7	65.5	3,360	---	---	---
	06/01/11		2.9	3.6	---	---	---	---	---
	07/28/11		1.9	2.6	104J	4,460	---	---	---
	08/18/11		2.6	2.9	82.0	4,170	---	---	---
	10/26/11		3.2	3.2	79.6	3,890	---	---	---
	01/12/12		ND (1.0)	ND (1.0)	122	4,090	---	---	---
	05/11/12		1.1	1.5	116	4,280	---	---	---
	07/11/12		ND (1.0)	1.1	97.4	4,080	---	---	---
	10/16/12		1.4	1.2	33.2	4,010	---	---	---
	01/18/13		1.2J	1.4	115J	3,990	---	---	---
	02/07/13		---	---	118	---	---	---	---
	05/06/13		1.0	1.3	114J	4,000	---	---	---
	05/06/13	FD	1.1	1.3	114J	3,950	---	---	---
	07/03/13		1.6	1.7	112	4,120	---	---	---
	10/09/13		1.9	1.9	95.5	4,020	---	---	---
	01/08/14		1.5	1.7	116	3,980	---	---	---
	04/10/14		---	---	---	---	96.6	24.4J	100
07/16/14		1.0	---	---	---	92.3	ND (10.1)	110	
EX-25	03/31/11		5.3	6.9	11.9	1,470	---	---	---
	04/07/11		5.2	5.9	20.4	1,970	---	---	---
	05/11/11		1.6	1.7	79.0J	4,340	---	---	---
	06/06/11		5.8	5.5	16.0	1,980	---	---	---
	07/07/11		7.4	7.2	22.3	2,300	---	---	---
	08/02/11		8.5	8.7	28.4	2,350	---	---	---
	08/17/11		8.9	7.9	19.3	2,280	---	---	---
	09/12/11		9.5	9.9	21.5	2,320	---	---	---
	10/26/11		7.9	9.5	24.2	2,480	---	---	---
	01/12/12		7.2	7.5	27.4	2,550	---	---	---
	04/10/12		6.8	6.8	27.3	2,670	---	---	---
07/11/12		6.5	6.5	29.6	3,040	---	---	---	
10/16/12		6.2	6.2	31.4J	2,840	---	---	---	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-25	01/18/13		1.6J	1.8	72.5J	4,120	---	---	---
	02/07/13		---	---	75.2	---	---	---	---
	05/06/13		2.3	2.7	69.0	3,940	---	---	---
	07/03/13		5.2	5.2	29.8	2,070	---	---	---
	10/09/13		4.2	4.6	27.9	3,030	---	---	---
	01/08/14		4.5	4.8	31.6	2,900	---	---	---
	04/10/14		---	---	---	---	54.8JS	14.6J	77.0
	07/16/14		4.5	---	---	---	90.4	8.27	76.0
EX-26	05/09/11		ND (0.2)	2.4	11.4	1,090	---	---	---
	07/13/11		37.3	34.2	14.4	1,200	---	---	---
	08/02/11		40.0	41.0	15.8	1,170	---	---	---
	08/17/11		40.7	42.8	15.5	1,170	---	---	---
	09/12/11		43.8	37.0	14.5	1,150	---	---	---
	10/26/11		42.8	42.7	13.9	1,210	---	---	---
	11/22/11		38.9	40.3	16.0	1,200	---	---	---
	01/12/12		39.1	41.1	14.8	1,240	---	---	---
	04/10/12		39.8	39.4	14.6	1,300	---	---	---
	07/11/12		36.1	33.4	15.5	1,490	---	---	---
	10/16/12		34.8	34.0	16.1	1,650	---	---	---
	01/18/13		29.3	28.0	14.0	1,670	---	---	---
	04/11/13		27.3	29.0	15.7	2,040	---	---	---
	07/03/13		26.8	24.9	15.9	2,070	---	---	---
	10/09/13		24.8	22.7	13.7	1,880	---	---	---
	01/08/14		25.6	26.5	14.0	1,810	---	---	---
	04/10/14		---	---	---	---	79.8	21.1J	51.0
	07/16/14		22.0	---	---	---	60.5	5.70	51.0
EX-27	05/09/11		2.3	2.7	48.0	3,800	---	---	---
	07/11/11		2.2	1.8	42.7	3,760	---	---	---
	08/02/11		4.7	4.9	17.6	1,920	---	---	---
	08/18/11		6.0	6.4	18.6	1,920	---	---	---
	09/12/11		2.5	2.5	38.0	3,570	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-27	10/26/11		6.4	6.2	18.7	2,010	---	---	---
	11/22/11		0.74	1.5	37.1	3,610	---	---	---
	01/12/12		1.6	2.0	36.8	3,460	---	---	---
	07/24/12		1.7	2.1	24.0	3,810	---	---	---
	10/16/12		7.7	7.5	17.8	2,200	---	---	---
	01/18/13		8.2	8.1	17.4	2,290	---	---	---
	05/06/13		1.6	1.7	20.1	3,400	---	---	---
	07/12/13		7.4	7.9	18.0	3,050	---	---	---
	10/09/13		9.7	9.1	19.2	2,300	---	---	---
	01/08/14		4.3	4.5	19.4	3,210	---	---	---
	01/08/14	FD	4.2	4.4	19.0	3,170	---	---	---
	04/10/14		---	---	---	---	56.7JS	15.8J	100
EX-28	07/18/14		1.3	---	---	---	141J	15.0	110
	05/09/11		ND (0.2)	ND (1.0)	75.3	3,920	---	---	---
	07/11/11		5.0	4.9	21.5	1,670	---	---	---
	08/02/11		5.9	6.1	13.5	1,560	---	---	---
	08/17/11		6.5	5.6	16.6	1,930	---	---	---
	09/12/11		6.1	5.8	20.4	2,170	---	---	---
	09/12/11	FD	6.1	5.7	20.4	2,200	---	---	---
	10/26/11		5.3	5.2	19.5	2,100	---	---	---
	11/22/11		5.0	5.2	25.7	2,340	---	---	---
	01/12/12		ND (0.06)	ND (1.0)	31.1	2,410	---	---	---
	04/30/12		7.2	6.5	20.3	2,390	---	---	---
	07/24/12		5.5	5.6	37.1	2,640	---	---	---
	10/16/12		8.3	8.6	19.8	2,590	---	---	---
	01/18/13		4.9	4.9	39.5	3,040	---	---	---
	05/06/13		1.9	2.2	49.5	3,280	---	---	---
07/12/13		5.1	5.9	24.4	2,850	---	---	---	
10/09/13		6.2	5.7	23.3	3,040	---	---	---	
01/08/14		5.4	5.8	23.8	2,880	---	---	---	
04/10/14		---	---	---	---	87.8	11.8J	71.0	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-28	07/16/14		5.7	---	---	---	67.6	13.5	74.0
EX-31	06/14/12		ND (0.2)	1.6	8.38	1,300	---	---	---
	07/09/12		4.6	4.6	9.28	1,330	---	---	---
	08/09/12		5.0	5.2	9.39J	1,290J	---	---	---
	09/04/12		5.4	5.4	9.47	1,310	---	---	---
	10/11/12		4.3	5.1	9.62	1,320	---	---	---
	11/09/12		3.9	3.8	9.27	1,280	---	---	---
	12/05/12		4.7	5.2	9.16	1,240	---	---	---
	01/31/13		4.9	5.3	9.09	1,340	---	---	---
	04/16/13		5.0	5.1	10.1	1,320	---	---	---
	07/08/13		5.0	5.1	9.86	1,330	---	---	---
	07/08/13	FD	5.0	5.2	9.86	1,320	---	---	---
	10/09/13		4.7	4.8	9.89	1,330	---	---	---
	01/08/14		4.7	5.2	9.70	1,300	---	---	---
	04/08/14		4.8	4.7	9.30	1,400	42.7J	ND (4.00)	47.0
07/18/14		4.3	4.0	10.0	1,400	46.3J	6.29	33.0	
EX-32	06/04/12		1.7	2.3	3.17	928	---	---	---
	06/14/12		1.1	1.6	3.00	1,040	---	---	---
	07/09/12		2.3	2.1	3.22	1,140	---	---	---
	08/09/12		2.2	2.8	3.03J	1,110J	---	---	---
	09/05/12		2.4	2.2	3.00	1,060	---	---	---
	10/11/12		2.4	2.9	3.05	1,090	---	---	---
	11/09/12		2.4	2.4	3.77	1,110	---	---	---
	12/05/12		2.4	2.5	3.13	1,200	---	---	---
	01/25/13		2.5	2.6	3.11	1,130	---	---	---
	04/16/13		2.1	2.2	2.99	1,110	---	---	---
	07/10/13		2.3	2.4	3.50	1,130	---	---	---
	10/09/13		2.3	2.7	4.13	1,260	---	---	---
	01/08/14		0.74	ND (1.0)	4.12	1,320	---	---	---
	04/18/14		2.1	2.2	3.30	1,400	36.6	ND (4.00)	23.0
07/18/14		2.1	2.1	4.10	1,400	28.8J	4.60	22.0	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-33	06/14/12		7.8	7.8	10.9	1,420	---	---	---
	07/09/12		5.2	5.2	9.91	1,460	---	---	---
	08/09/12		5.0	5.2	9.51J	1,320J	---	---	---
	08/09/12	FD	5.0	5.4	9.55J	1,340J	---	---	---
	09/04/12		5.6	5.5	9.19	1,460	---	---	---
	10/11/12		6.9	6.3	14.6J	1,620	---	---	---
	11/09/12		6.5	6.6	10.8	1,520	---	---	---
	12/05/12		6.1	6.3	10.2	1,620	---	---	---
	01/31/13		0.26	1.4	5.16	1,460	---	---	---
	03/12/13		5.7	6.2	10.2	1,450	---	---	---
	04/16/13		5.6	5.8	12.0	1,920	---	---	---
	07/08/13		5.1	5.3	12.3	2,280	---	---	---
	10/09/13		4.9	5.0	14.0	2,380	---	---	---
	01/08/14		4.5	4.8	15.9	2,580	---	---	---
	04/08/14		4.1	4.3	16.0	3,000	41.5J	4.97	47.0
07/18/14		4.4	4.2	18.0	3,100	43.0J	11.0	43.0	
EX-34	12/05/12		6.2	6.6	8.13	1,100	---	---	---
	01/31/13		18.4	19.6	10.4	1,170	---	---	---
	02/19/13		18.7	19.3	11.0	1,200	---	---	---
	03/11/13		17.9	18.3	12.0	1,370	---	---	---
	04/11/13		16.8	18.6	12.0	1,420	---	---	---
	07/03/13		18.4	17.2	12.3	1,320	---	---	---
	07/03/13	FD	18.3	17.4	12.6	1,360	---	---	---
	10/09/13		19.8	18.6	12.0	1,370	---	---	---
	01/08/14		20.1	21.5	12.0	1,380	---	---	---
	04/08/14		---	---	---	---	57.3J	6.91	45.0
07/18/14		21.0	---	---	---	60.0J	8.31	45.0	
EX-35	04/16/13		3.3	4.2	14.0	2,140	---	---	---
	05/07/13		3.3	4.5	17.0	2,420	---	---	---
	06/04/13		3.2	3.6	16.4	2,410	---	---	---
	07/10/13		3.3	4.2	15.2	2,290	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
EX-35	10/09/13		2.8	3.4	21.5	3,030	---	---	---
	01/08/14		2.9	3.4	19.8	2,610	---	---	---
	01/08/14	FD	2.9	3.8	20.2	2,620	---	---	---
	04/08/14		3.0	3.3	20.0	3,000	50.2J	ND (4.78)	40.0
	07/18/14		2.8	2.8	22.0	3,000	36.1J	9.09	40.0
G-1R	03/09/11		5.1	5.4	7.24	1,560	---	---	---
	04/15/11		4.7	5.1	7.56J	1,710	---	---	---
	05/09/11		4.3	5.0	13.7	1,590	---	---	---
	05/09/11	FD	4.3	4.5	11.8	1,580	---	---	---
	06/06/11		4.4	4.6	7.66	1,700	---	---	---
	06/06/11	FD	4.4	4.5	7.80	1,650	---	---	---
	07/07/11		4.0	4.3	8.78	1,800	---	---	---
	08/17/11		4.0	3.6	9.31	1,920	---	---	---
	08/23/11		4.2	3.5	8.40	1,900	43.6	9.40	---
	09/15/11		3.8	3.8	9.90	2,210	---	---	---
	10/25/11		3.9	4.2	9.68	2,070	---	---	---
	12/21/11		1.9	2.4	7.42	1,520	---	---	---
	12/21/11	FD	1.8	2.4	7.20	1,490	---	---	---
	01/27/12		3.0	3.3	9.57	1,990	44.6	ND (4.00)	---
	04/19/12		4.0	4.3	11.0	1,870	---	---	---
	07/10/12		1.5	1.7	10.8	2,630	---	---	---
	10/18/12		ND (0.06)	ND (1.0)	2.08	1,830	---	---	---
	10/18/12	FD	ND (0.06)	ND (1.0)	2.07	1,810	---	---	---
	01/28/13		ND (1.0)	ND (1.0)	8.08	2,780	---	---	---
	10/09/13		1.4	1.5	9.15	3,890	---	---	---
01/08/14		1.3	1.5	8.61	3,690	---	---	---	
04/08/14		1.7	1.4	7.80	4,100	29.9JS	ND (5.54)	35.0	
07/18/14		1.3	1.2	8.70	4,400	30.9J	6.26	37.0	
G-2R	03/09/11		1.6	1.4	12.1	2,110	---	---	---
	04/07/11		5.2	5.9	9.38	1,690	---	---	---
	05/09/11		4.6	4.6	10.0	1,740	---	---	---

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
G-2R	06/06/11		4.5	4.2	10.1	1,750	---	---	---
	07/07/11		4.2	4.2	10.1	1,800	---	---	---
	08/17/11		4.2	4.2	11.0	1,840	---	---	---
	09/12/11		4.0	4.8	11.7	2,090	---	---	---
	10/25/11		3.2	3.3	17.2	3,000	---	---	---
	12/21/11		1.5	1.7	20.8	3,200	---	---	---
	04/19/12		3.7	4.4	13.5	1,840	---	---	---
	07/10/12		3.7	4.1	13.3	2,070	---	---	---
	10/16/12		3.2	3.3	15.2	2,310	---	---	---
	01/16/13		3.3	3.4	14.3	2,450	---	---	---
	10/09/13		3.0	3.6	20.7	2,460	---	---	---
	10/09/13	FD	3.0	3.4	18.3	2,710	---	---	---
	01/08/14		1.7	1.8	35.6	4,360	---	---	---
	04/08/14		1.7	1.5	36.0	4,100	75.8J	7.03	58.0
	07/18/14		0.54J	1.5	38.0	5,200	74.0J	10.2	53.0
G-5R	07/18/14	FD	1.2J	1.5	37.0	5,200	66.3J	ND (8.22)	55.0
	03/09/11		3.8	4.0	2.34	548	---	---	---
	03/09/11	FD	3.7	3.6	2.35	585	---	---	---
	04/07/11		4.1	4.6	5.41	774	---	---	---
	05/10/11		4.4	4.8	6.27	916	---	---	---
	06/06/11		4.6	5.4	7.15	992	---	---	---
	07/07/11		4.6	4.7	7.12	1,060	---	---	---
	08/17/11		4.8	4.5	7.29	1,040	---	---	---
	08/17/11	FD	4.8	4.2	7.38	1,040	---	---	---
	09/12/11		6.6	6.1	14.1	1,520	---	---	---
	10/25/11		6.1	5.0	14.0	1,600	81.3	7.90	---
	10/25/11		6.1	6.8	14.2	1,620	---	---	---
11/17/11		5.3	3.9	---	---	---	---	---	
11/21/11		5.1	4.3	---	---	---	---	---	
11/22/11		4.8	5.0	7.58	1,100	---	---	---	
11/22/11		5.0	4.4	---	---	---	---	---	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
G-5R	11/30/11		5.0J	4.3	---	---	---	---	---
	12/01/11		4.9	4.5	---	---	---	---	---
	12/08/11		5.1	4.2J	---	---	---	---	---
	12/13/11		4.8J	4.4	---	---	---	---	---
	12/15/11		5.2	5.2	9.15	1,030	---	---	---
	12/15/11		5.2J	4.6	6.90J	---	---	---	---
	12/19/11		5.1	4.3	6.90	---	---	---	---
	12/19/11	FD	5.0	---	---	---	---	---	---
	12/21/11		5.2	4.7	---	---	---	---	---
	12/27/11		4.1	3.3	---	---	---	---	---
	12/27/11	FD	4.2	---	---	---	---	---	---
	12/29/11		---	---	6.30	---	48.8	5.00	---
	01/27/12		4.5	5.1	7.09	1,020	35.4	4.88	---
	02/24/12		4.6	5.0	7.02	1,030	---	---	---
	04/19/12		4.6	4.8	6.96	1,020	---	---	---
	05/16/12		4.3	4.3	7.14	1,110	---	---	---
	06/04/12		4.4	5.1	7.18	1,030	---	---	---
	07/10/12		4.4	4.3	6.68	1,040	---	---	---
	10/16/12		4.1	4.3	6.80	1,160	---	---	---
	01/16/13		4.2	4.4	7.19	1,110	---	---	---
	04/16/13		4.1	4.2	7.42	1,200	---	---	---
	07/08/13		3.7	4.1	7.99	2,160	---	---	---
	10/09/13		3.8	3.6	9.22	1,300	---	---	---
01/08/14		3.6	3.6	10.1	1,330	---	---	---	
01/08/14	FD	3.6	3.6	10.2	1,320	---	---	---	
04/08/14		3.7	3.6	6.90	1,200	30.9J	4.17	23.0	
07/18/14		3.6	3.3	7.40	1,100	19.6J	ND (4.00)	18.0	
IW-01	02/22/94		---	40.0	---	---	---	---	---
	05/31/94		---	40.0	---	---	---	---	---
	08/09/94		---	30.0	---	---	---	---	---
	10/27/94		---	40.0	---	---	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-01	02/08/95		---	40.0	---	---	---	---	---
	04/04/95		---	30.0	---	---	---	---	---
	08/16/95		---	30.0	---	---	---	---	---
	10/03/95		---	40.0	---	---	---	---	---
	02/29/96		---	50.0	---	---	---	---	---
	04/03/96		---	30.0	---	---	---	---	---
	05/22/96		---	40.0	---	---	---	---	---
	07/29/96		---	40.0	---	---	---	---	---
	10/02/96		---	40.0	---	---	---	---	---
	02/05/97		45.0	55.0	---	---	---	---	---
	04/08/97		---	50.0	---	---	---	---	---
	07/29/97		44.0	47.0	---	---	---	---	---
	10/08/97		36.0	40.0	---	---	---	---	---
	03/04/98		60.0	56.0	---	---	---	---	---
	05/19/98		42.0	47.0	---	---	---	---	---
	08/12/98		47.0	49.0	---	---	---	---	---
	11/18/98		50.0	46.0	---	---	---	---	---
	05/27/99		29.0	31.0	---	---	---	---	---
	08/26/99		22.0	31.0	---	---	---	---	---
	11/09/99		38.0	47.0	---	---	---	---	---
	02/08/00		55.0	63.0	---	---	---	---	---
	05/03/00		58.0	61.0	---	---	---	---	---
	08/10/00		54.0	56.0	---	---	---	---	---
	11/08/00		20.0	26.0	---	---	---	---	---
	03/08/01		20.0	34.0	---	---	---	---	---
	05/22/01		56.8	46.0	---	---	---	---	---
	09/25/01		ND (10.0)	30.0	---	---	---	---	---
	12/04/01		ND (10.0)	42.0	---	---	---	---	---
	12/06/01		---	---	20.5	1,650	---	---	---
	02/08/02		8.7	34.2	---	---	---	---	---
	05/22/02		---	---	16.7	1,730	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-01	05/22/02		18.6	19.3	---	---	---	---	---
	08/27/02		10.0	17.9	---	---	---	---	---
	08/27/02	FD	9.6	12.7	---	---	---	---	---
	11/12/02		15.7	16.2	---	---	---	---	---
	02/19/03		15.0	22.8	---	---	---	---	---
	08/13/03		7.0	8.8	---	---	---	---	---
	02/23/04		6.4	8.4	---	---	---	---	---
	08/26/04		ND (0.2)	4.3	---	---	---	---	---
	02/10/05		2.7	4.6	---	---	---	---	---
	12/06/06		ND (0.2)	ND (1.0)	13.8	1,130	---	---	---
	05/10/11		22.4	24.5	---	---	---	---	---
	06/15/11		25.7	26.6	15.5	1,150	---	---	---
	07/06/11		25.5	27.9	16.8	1,180	---	---	---
	08/17/11		31.9	35.6	16.1	1,300	---	---	---
	09/13/11		35.4	35.9	15.0	1,140	---	---	---
	10/25/11		35.1	35.5	15.5	1,280	---	---	---
	10/25/11	FD	36.8	34.8	15.6	1,280	---	---	---
	11/22/11		36.2	36.3	16.4	1,190	---	---	---
	12/13/11		34.8	32.4	14.8	1,140	---	---	---
	02/02/12		29.9	30.2	15.6	1,120	40.1	10.5J	---
	05/11/12		34.9	34.5	15.8	1,190	---	---	---
	07/20/12		35.6	35.6	15.2	1,300	---	---	---
	10/12/12		36.5	35.0	14.9	1,350	---	---	---
	01/28/13		35.2	38.8	13.8	1,270	---	---	---
	05/07/13		32.8	33.2	14.2	1,270	---	---	---
	07/08/13		31.2	31.6	12.8	1,300	---	---	---
	07/08/13	FD	31.7	31.7	13.0	1,320	---	---	---
	10/09/13		30.3	30.5	13.4	1,320	---	---	---
	01/08/14		26.5	26.4	11.9	1,280	---	---	---
	04/18/14		28.0	27.0	11.0	1,300	58.4	7.49	41.0
07/17/14		26.0	28.0	11.0	1,300	46.4J	6.11	35.0	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-02	02/22/94		---	50.0	---	---	---	---	---
	05/31/94		---	60.0	---	---	---	---	---
	08/09/94		---	40.0	---	---	---	---	---
	10/27/94		---	90.0	---	---	---	---	---
	02/08/95		---	70.0	---	---	---	---	---
	04/04/95		---	70.0	---	---	---	---	---
	08/16/95		---	80.0	---	---	---	---	---
	10/03/95		---	90.0	---	---	---	---	---
	02/29/96		---	80.0	---	---	---	---	---
	04/03/96		---	70.0	---	---	---	---	---
	05/22/96		---	70.0	---	---	---	---	---
	07/29/96		---	80.0	---	---	---	---	---
	10/02/96		---	70.0	---	---	---	---	---
	02/05/97		58.0	75.0	---	---	---	---	---
	02/05/97	FD	56.0	72.0	---	---	---	---	---
	04/08/97		---	47.0	---	---	---	---	---
	07/29/97		77.0	83.0	---	---	---	---	---
	07/29/97	FD	78.0	84.0	---	---	---	---	---
	10/08/97		82.0	86.0	---	---	---	---	---
	10/08/97	FD	70.0	85.0	---	---	---	---	---
	03/05/98		62.0	59.0	---	---	---	---	---
	03/05/98	FD	---	57.0	---	---	---	---	---
	05/19/98		53.0	62.0	---	---	---	---	---
	05/19/98	FD	---	66.0	---	---	---	---	---
	08/12/98		70.0	70.0	---	---	---	---	---
	08/12/98	FD	---	70.0	---	---	---	---	---
	11/19/98		50.0	49.0	---	---	---	---	---
	11/19/98	FD	52.0	50.0	---	---	---	---	---
	02/24/99		42.0	42.0	---	---	---	---	---
	02/24/99	FD	42.0	41.0	---	---	---	---	---
	05/26/99		34.0	45.0	---	---	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-02	05/26/99	FD	---	45.0	---	---	---	---	---
	08/26/99		20.0	28.0	---	---	---	---	---
	08/26/99	FD	---	25.0	---	---	---	---	---
	11/09/99		20.0	29.0	---	---	---	---	---
	11/09/99	FD	20.0	29.0	---	---	---	---	---
	02/08/00		24.0	32.0	---	---	---	---	---
	02/08/00	FD	---	33.0	---	---	---	---	---
	05/03/00		30.0	27.0	---	---	---	---	---
	05/03/00	FD	---	27.0	---	---	---	---	---
	08/10/00		26.0	30.0	---	---	---	---	---
	08/10/00	FD	21.0	29.0	---	---	---	---	---
	11/08/00		22.0	25.0	---	---	---	---	---
	11/08/00	FD	22.0	24.0	---	---	---	---	---
	03/08/01		20.0	14.0J	---	---	---	---	---
	03/08/01	FD	---	14.0J	---	---	---	---	---
	05/22/01		20.0	14.0	---	---	---	---	---
	05/22/01	FD	19.0	14.0	---	---	---	---	---
	09/25/01		ND (10.0)	9.0	---	---	---	---	---
	09/25/01	FD	ND (10.0)	5.1	---	---	---	---	---
	12/04/01		ND (10.0)	20.0	---	---	---	---	---
	12/04/01	FD	ND (10.0)	8.0	---	---	---	---	---
	02/08/02		9.6	12.9	---	---	---	---	---
	05/23/02		ND (0.2)	1.5	---	---	---	---	---
	05/23/02	FD	ND (0.2)	2.1	---	---	---	---	---
	08/27/02		9.9	12.4	---	---	---	---	---
	11/12/02		2.0	4.1	---	---	---	---	---
	02/19/03		2.8	8.1	---	---	---	---	---
	08/15/03		2.6	6.6	---	---	---	---	---
	02/16/04		3.5	8.1	---	---	---	---	---
	08/26/04		ND (0.2)	3.5	---	---	---	---	---
	02/10/05		1.6	3.5	---	---	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-02	12/06/06		ND (0.2)	ND (1.0)	3.25	968	---	---	---
	05/10/11		10.0	10.1	---	---	---	---	---
	06/15/11		10.2	10.0	15.7	1,050	---	---	---
	07/06/11		10.1	9.6	16.4	1,110	---	---	---
	08/17/11		10.4	9.2	17.0	1,090	---	---	---
	09/13/11		10.0	10.6	16.2	1,080	---	---	---
	10/25/11		10.6	10.6	16.2	1,180	---	---	---
	11/22/11		10.0	9.8	16.6	1,000	---	---	---
	12/13/11		10.0	9.1	16.1	1,010	---	---	---
	02/02/12		9.0	9.8	16.0	1,080	41.8	12.5J	---
	05/11/12		9.7	10.2	16.1	1,090	---	---	---
	07/20/12		10.7	10.1	15.9	1,070	---	---	---
	10/12/12		12.4	12.0	15.4J	1,070	---	---	---
	02/18/13		10.3	11.0	15.3	1,060	---	---	---
	05/07/13		13.4	13.5	15.3	1,030	---	---	---
	07/08/13		15.9	16.4	15.4	1,080	---	---	---
	10/09/13		16.6	14.9	23.3	1,070	---	---	---
	01/08/14		14.8	14.8	14.9	1,100	---	---	---
	04/18/14		14.0	13.0	14.0	1,100	36.6	8.89	31.0
07/17/14		15.0	17.0	14.0	1,000	39.7J	7.38	28.0	
IW-03	06/15/11		4.8	5.1	13.0	1,070	---	---	---
	07/06/11		4.6	4.9	14.0	1,140	---	---	---
	08/17/11		3.8	4.0	14.9	1,120	---	---	---
	09/13/11		4.2	4.2	14.2	1,110	---	---	---
	10/25/11		4.2	4.8	15.1	1,170	---	---	---
	11/22/11		4.2	4.5	14.7	1,100	---	---	---
	12/13/11		2.2	4.1	15.1	1,050	---	---	---
	02/02/12		4.4	4.9	14.7	1,100	39.0	6.20J	---
	07/20/12		4.1	4.2	14.6	1,080	---	---	---
	10/12/12		0.87	1.4	13.3J	1,070	---	---	---
08/08/13		5.9	6.2	16.5	1,110	---	---	---	

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
IW-03	10/09/13		1.4	2.0	17.8	1,120	---	---	---
	10/09/13	FD	1.4	1.7	15.2	1,130	---	---	---
	01/08/14		5.4	5.2	18.5	1,110	---	---	---
	04/18/14		5.0	4.7	16.0	1,100	52.5	9.18	35.0
	07/17/14		ND (0.06)	ND (1.0)	13.0	1,100	25.7J	4.65	18.0
Y-01	08/26/13		11.7	10.7	---	---	---	---	---
	04/23/14		---	---	---	1,600	45.9J	4.29	32.0
	07/17/14		12.0	---	---	1,600	35.1J	7.23	29.0
Y-02	08/26/13		6.6	5.9	---	---	---	---	
Y-03	08/26/13		13.6	12.3	---	---	---	---	---
	04/23/14		---	---	---	1,600	51.8J	6.53	32.0
	07/17/14		11.0	---	---	1,700	40.5J	6.43	31.0

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
ATU Irrigation Supply Water									
CPVT	12/21/11		1.8	2.0	30.1	2,510	57.2	23.0	---
	01/27/12		3.5	4.0	11.0	1,150	41.1	7.56	---
	05/11/12		4.9	4.9	11.1	1,150	36.2	6.06	---
	07/09/12		6.4	6.1	11.1	1,160	39.9	11.9	---
	10/11/12		5.0	5.1	9.94	1,190	37.2	11.7	---
	01/16/13		5.9	6.1	8.40	1,020	29.5	6.30	28.3
	04/01/13		6.2	6.0	11.3	1,130	41.3	9.17	31.6
	07/08/13		6.5	6.5	12.8	1,370	26.2	8.01	---
	10/09/13		6.3	6.3	12.7	1,200	---	---	---
	01/08/14		5.6	5.5	10.9	1,240	---	---	---
	01/08/14	FD	5.5	5.6	10.7	1,240	---	---	---
	04/10/14		7.3	7.0	13.0	1,300	95.6	16.8J	34.0
	07/16/14		7.2	6.3	13.0	1,200	41.0J	4.84	35.0
DVD-BS-01	09/29/04		64.0	62.1	9.15	960	---	---	---
	10/11/04		55.5	55.6	9.92	976	---	---	---
	10/28/04		49.9	50.4	9.88	946	---	---	---
	11/22/04		40.9	43.6	11.3	1,450	---	---	---
	12/09/04		39.6	41.3	9.63	992	---	---	---
	12/20/04		34.3	32.2	10.6	1,210	---	---	---
	01/13/05		36.8	38.2	10.9	1,170	---	---	---
	02/02/05		27.0	26.3	11.4	1,240	---	---	---
	02/15/05		25.5	28.0	11.2	1,180	---	---	---
	03/09/05		25.6	31.5	11.1	1,160	---	---	---
	04/11/05		24.5	26.0	11.5	1,210J	---	---	---
	05/04/05		23.2	22.5	11.8	1,280	---	---	---
	06/07/05		20.8	23.7	11.7	1,270	---	---	---
	07/14/05		20.1	23.9J	12.2	1,340	---	---	---
	08/15/05		19.2	19.8	11.8	1,310	---	---	---
	09/27/05		18.8	16.4	12.3	1,300	---	---	---
	10/10/05		18.6	15.5	12.4	1,330	---	---	---

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Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
DVD-BS-01	11/07/05		19.6	19.6	12.4	1,290	---	---	---
	12/08/05		18.3	17.1	12.6	1,320	---	---	---
	01/25/06		17.3	15.1	12.3	1,270	---	---	---
	02/16/06		18.4	17.2	12.3	1,080	---	---	---
	04/18/06		17.0	18.5	13.4	1,260	---	---	---
	06/12/06		16.9	21.1	13.2	1,070	---	---	---
	08/09/06		17.5	16.4	12.1	1,170	---	---	---
	10/19/06		16.9	15.5	15.8	1,810	---	---	---
	12/06/06		18.0	15.0	13.7	1,380	---	---	---
	02/13/07		18.6	17.1	14.5	1,720	---	---	---
	04/10/07		17.1	20.6	15.5	1,700	---	---	---
	08/13/07		18.1	18.3	14.6	1,370	---	---	---
	12/05/07		19.1	19.2	14.4	1,480	---	---	---
	02/14/08		18.7	17.4	13.5	1,460	---	---	---
	04/07/08		21.1	21.9	12.1	1,070	---	---	---
	04/07/08	FD	21.1	22.1	12.2	1,050	---	---	---
	06/04/08		22.0	22.4	12.9	1,340	---	---	---
	08/07/08		21.6	22.1	12.5	1,320	---	---	---
	11/05/08		24.3	21.9	14.4	1,410	---	---	---
	02/04/09		17.6	14.5	13.7	1,330	---	---	---
	05/12/09		23.8	22.0	13.4	1,400	---	---	---
	08/12/09		19.4	18.2	13.5	1,280	---	---	---
	11/10/09		16.4	16.3	14.4	1,510	---	---	---
	02/09/10		15.1	14.2	14.5	1,320	---	---	---
	05/12/10		14.4	15.1	14.6	1,400	---	---	---
	08/24/10		16.1	14.7	13.0J	1,370	---	---	---
	10/28/10		12.5	12.8	15.4	1,510	---	---	---
	01/26/11		18.9	17.6	16.5	1,470	---	---	---
	05/05/11		14.5	14.2	17.5	1,680	---	---	---
	08/01/11		13.9	12.8	17.6	1,690	---	---	---
	10/26/11		17.1	16.4	18.3	1,680	---	---	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
DVD-BS-01	10/26/11	FD	17.1	14.7	16.6	1,670	---	---	---
	01/12/12		22.0	23.4	20.2	1,910	---	---	---
	04/09/12		19.1	18.2	21.2	1,900	---	---	---
	07/13/12		9.2	9.1	24.3	2,330	---	---	---
	10/16/12		12.8	13.0	19.0	2,010	---	---	---
	01/18/13		13.2	13.1	15.0	1,440	---	---	---
	05/06/13		10.1	11.0	18.5	1,890	---	---	---
	07/03/13		11.5	12.0	19.7	2,310	---	---	---
	10/09/13		12.4	11.2	16.5	2,130	---	---	---
	01/08/14		10.1	10.8	20.3	2,060	---	---	---
	04/10/14		10.0	11.0	20.0	2,700	38.4JS	17.0J	72.0
GPVTN	04/10/14	FD	10.0	10.0	20.0	2,700	45.6JS	21.2J	74.0
	07/16/14		16.0	14.0	15.0	2,000	71.1	11.3	60.0
	12/21/11		1.2	1.7	17.8	3,200	75.1	26.8	---
	01/27/12		2.8	2.9	10.8	2,080	41.8	5.29	---
	04/30/12		3.6	3.8	12.6	2,230	37.0	ND (4.00)	---
	07/10/12		3.6	3.9	12.6	2,000	46.5	12.7	---
	07/10/12	FD	3.6	3.9	12.8	2,030	48.4	9.63	---
	10/16/12		3.5	3.8	12.2	2,060	35.5	6.48	---
	01/28/13		4.8	5.4	12.1	1,650	47.6	12.6	36.0
	04/16/13		3.9	4.4	13.4	1,970	44.5	25.8	29.3
	07/08/13		2.8	3.2	21.0	2,980	24.0	13.1	---
GPVTS	10/09/13		2.4	2.4	16.8	2,910	---	---	---
	01/08/14		4.3	4.8	11.6	1,610	---	---	---
	04/08/14		4.3	3.8	16.0	2,600	35.8J	10.7	39.0
	04/08/14	FD	4.3	4.0	15.0	2,500	49.9J	10.2	38.0
	07/18/14		2.9	2.7	17.0	2,800	35.6J	8.67	36.0
	12/21/11		3.4	3.6	11.7	1,900	49.2	13.2	---
	01/27/12		4.4	4.8	7.45	1,120	37.5	4.10	---
	04/30/12		4.2	4.5	10.4	1,190	27.5	14.1J	---
	07/10/12		5.4	5.4	8.43	1,150	45.9	12.7	---

Table D-1

Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L
GPVTS	10/16/12		4.6	5.0	8.81	1,190	34.3	8.45	---
	01/16/13		3.6	3.5	13.2	2,150	42.2	4.01	36.8
	01/16/13	FD	3.6	3.7	13.7	2,160	44.1	9.12	37.7
	04/16/13		5.3	5.4	12.1	1,410	39.9	16.4	30.5
	07/08/13		4.3	4.6	10.0	1,530	22.3	5.83	---
	10/09/13		4.5	4.1	9.37	1,360	---	---	---
	01/08/14		2.2	2.6	21.8	3,140	---	---	---
	04/08/14		6.2	5.6	11.0	1,300	51.3	8.89	33.0
	07/18/14		ND (0.06)	ND (1.0)	16.0	2,000	55.7J	12.0	43.0
RPVT	12/13/11		23.4	21.4	15.6	1,130	33.8J	11.9J	---
	02/02/12		18.9	20.2	16.2	1,080	37.0	5.33J	---
	05/11/12		24.7	24.7	15.8	1,190	26.7	6.30	---
	07/20/12		25.1	24.3	16.8	1,150	54.0	8.45	---
	10/12/12		26.9	28.0	14.7J	1,190	31.6	13.7	---
	02/18/13		25.2	26.5	14.6	1,250	53.2	8.88	34.2
	05/08/13		23.9	24.5	14.1	1,180	36.7	10.4	35.5
	07/08/13		24.0	25.3	13.8	1,210	14.8	7.87	---
	07/08/13	FD	24.0	24.8	15.4	1,190	15.0	5.25	---
	10/09/13		23.8	22.6	13.7	1,170	---	---	---
	01/08/14		16.6	16.4	14.6	1,180	---	---	---
YAU	04/18/14		26.0	26.0	11.0	1,200	52.0	7.11	36.0
	07/17/14		23.0	24.0	12.0	1,200	40.5J	6.31	31.0
	01/08/14		5.2	5.1	11.5	968	---	---	---
	04/23/14		9.7	9.0	9.30	990	44.5J	8.13	32.0
	07/17/14		7.1	7.9	13.0	1,200	40.2J	8.12	29.0

Table D-1

**Historical Groundwater Analytical Results for Extraction Wells and Irrigation Water
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California**

Notes:

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

* Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2.

Therefore, the Ranch ATU is considered to be in OU2.

-- = not analyzed

µg/L = micrograms per liter

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

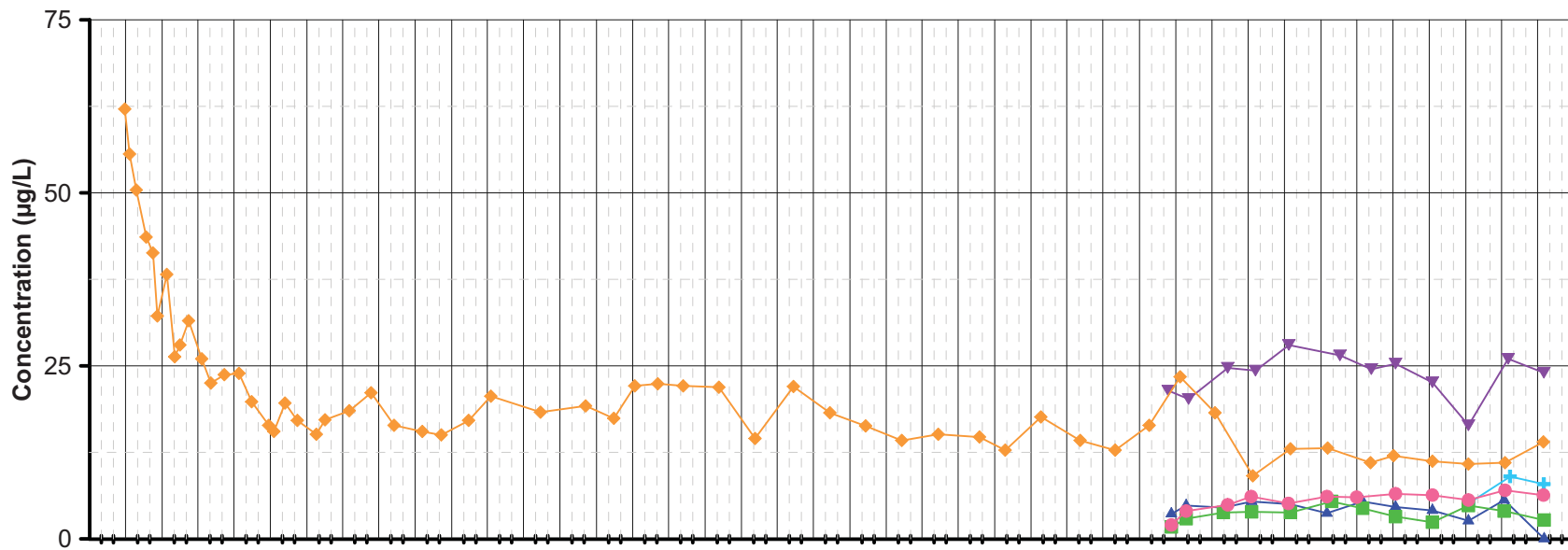
OU = Operable Unit

mg/L = milligrams per liter

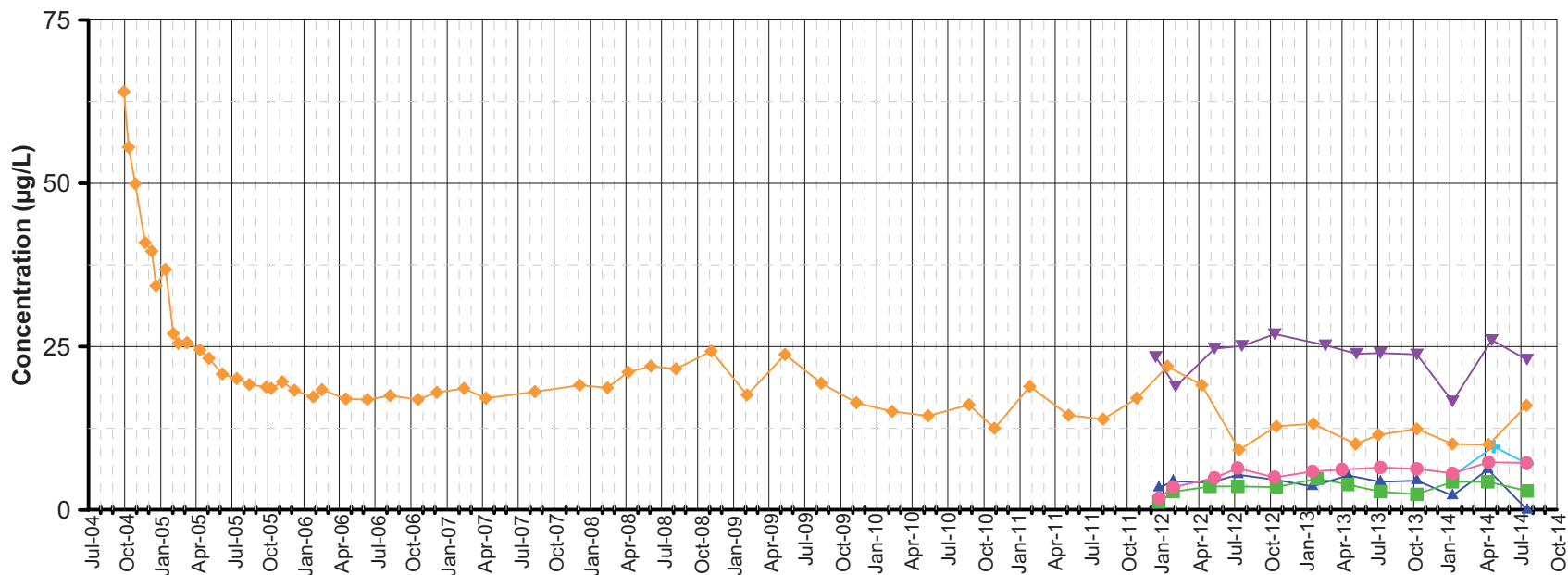
ND (x.x) = not detected at or above the reporting limit shown

S = screening

Total Dissolved Chromium



Hexavalent Chromium



Agricultural Treatment Units

- Cottrell Pivot (CPVT)
- ◆ Booster Station - DVD (DVD-BS-01)
- Gorman - North Pivot (GPVTN)
- ▲ Gorman - South Pivot (GPVTS)
- ▼ Ranch Pivot (RPVT)
- ◆ Yang (YAU)

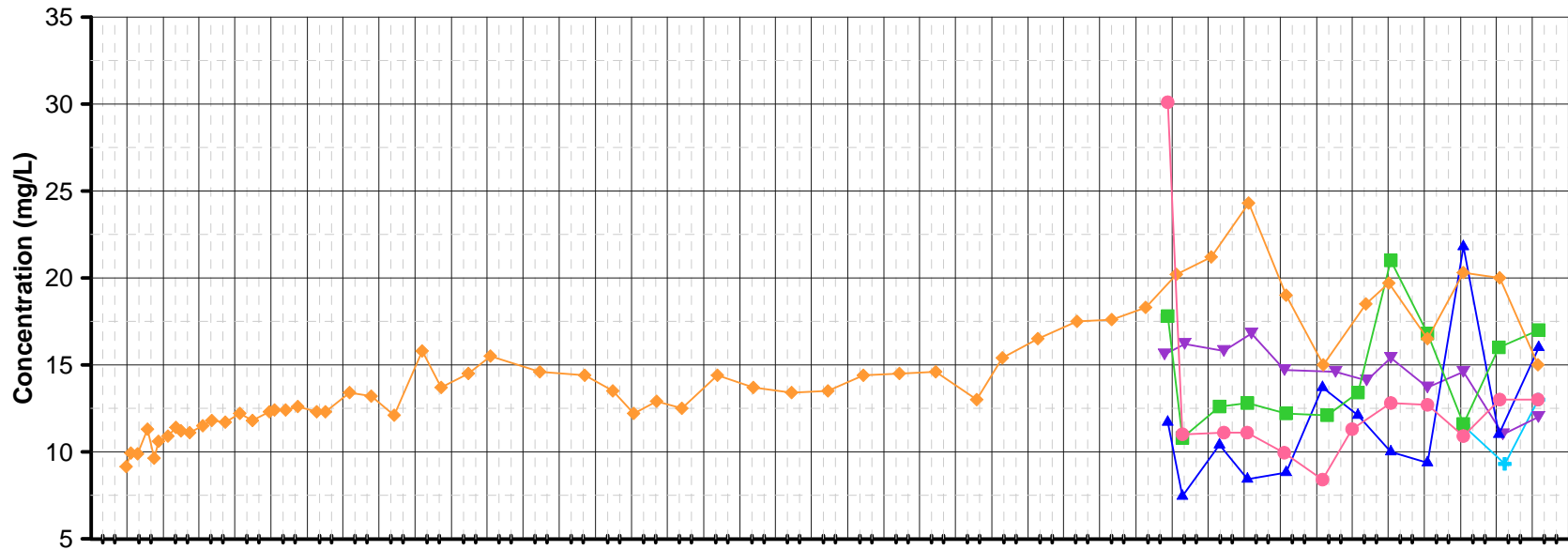
Notes:

Groundwater concentrations in micrograms per liter (µg/L)

**APPENDIX D
CONCENTRATION TRENDS FOR SELECT ANALYTES
FOR AGRICULTURAL TREATMENT UNITS**

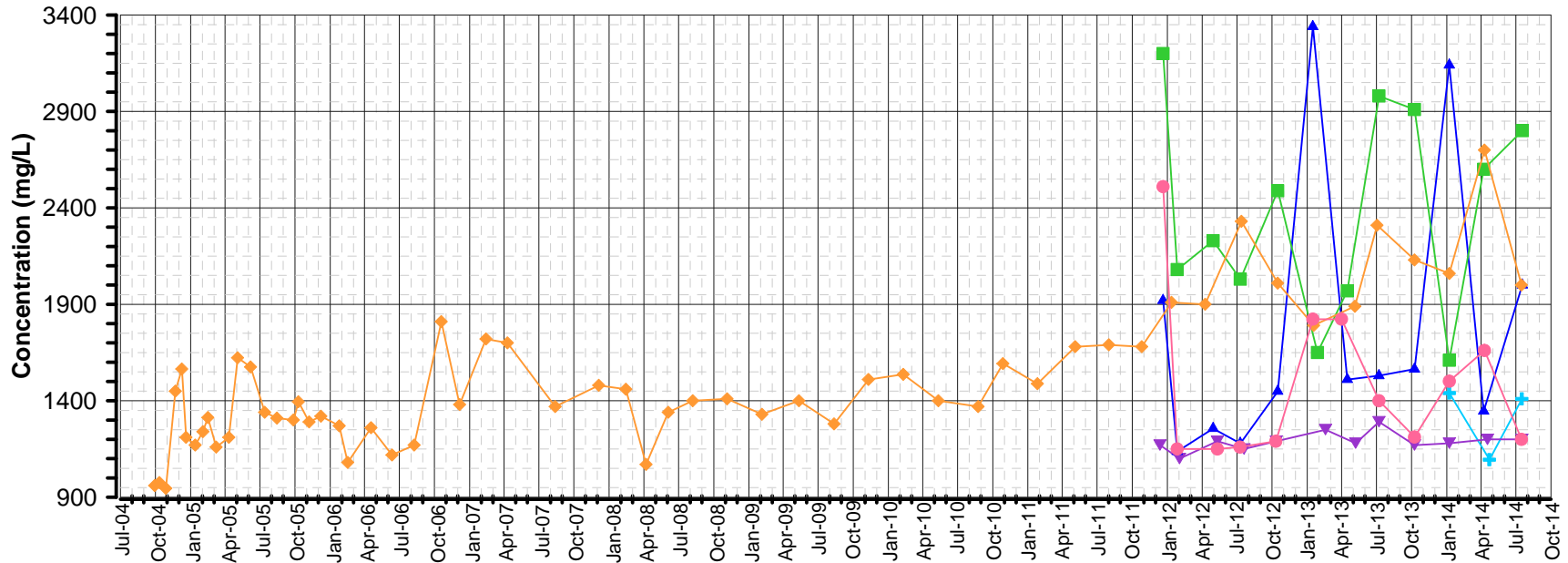
THIRD QUARTER 2014 AGRICULTURAL UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY, HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA

Nitrate as Nitrogen



Agricultural Treatment Units

Total Dissolved Solids



Agricultural Treatment Units

- Cottrell Pivot (CPVT)
- ◆ Booster Station - DVD (DVD-BS-01)
- Gorman - North Pivot (GPVTN)
- ▲ Gorman - South Pivot (GPVTS)
- ▼ Ranch Pivot (RPVT)
- ◆ Yang (YAU)

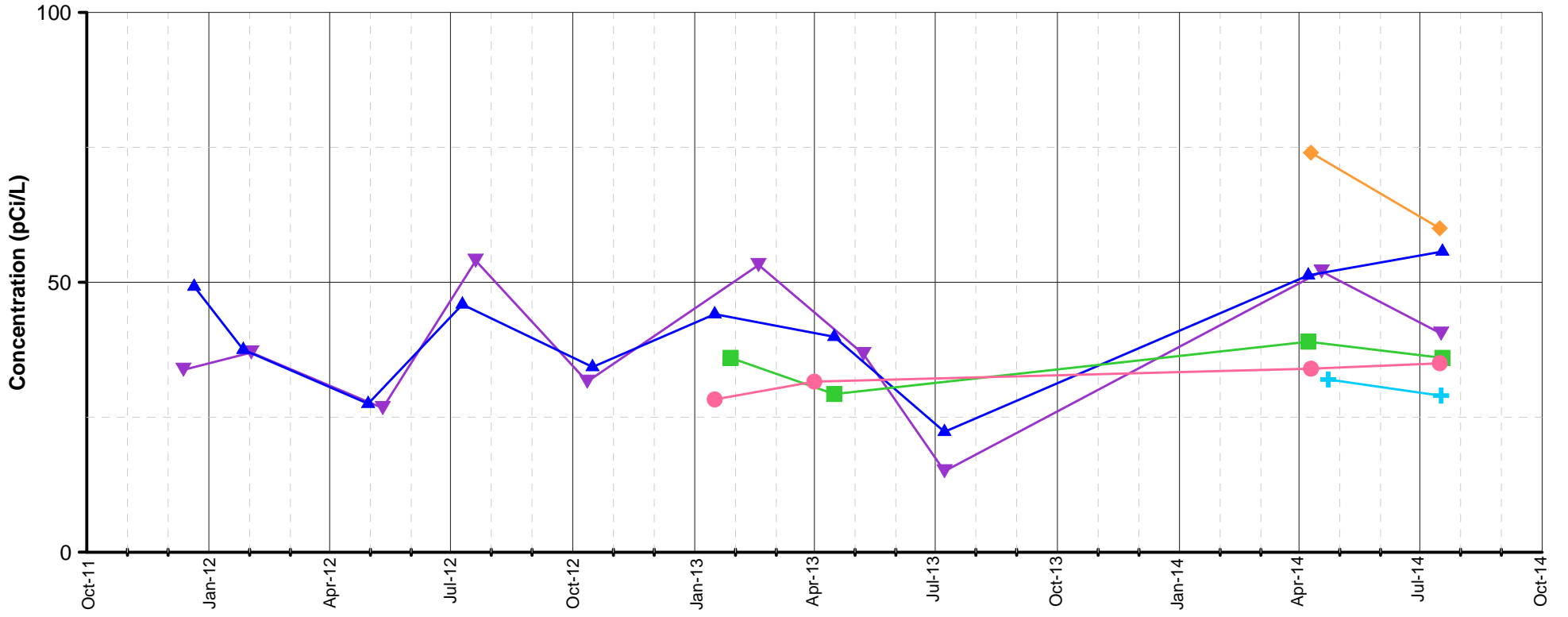
Notes:

1) Groundwater concentrations in milligrams per liter (mg/L)

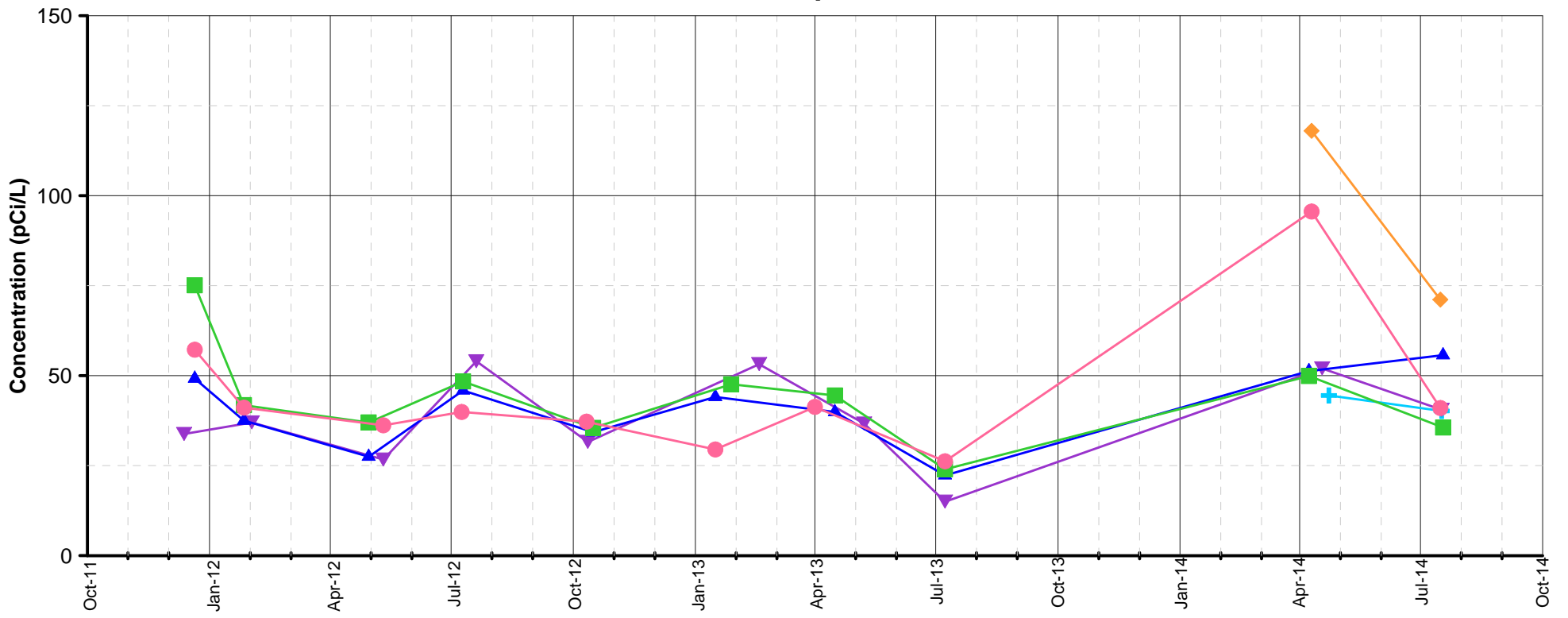
APPENDIX D CONCENTRATION TRENDS FOR SELECT ANALYTES FOR AGRICULTURAL TREATMENT UNITS

THIRD QUARTER 2014 AGRICULTURAL UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY, HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA

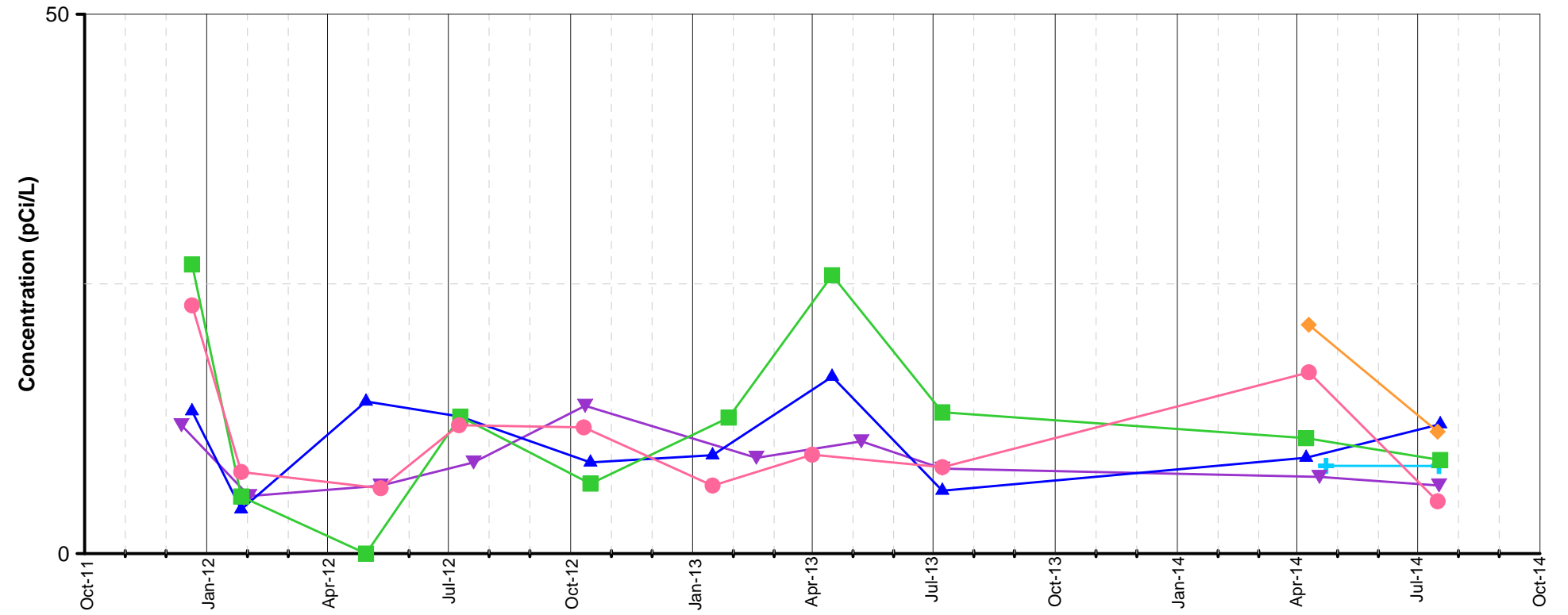
Dissolved Uranium



Gross Alpha



Gross Beta



Agricultural Treatment Units

- Cottrell Pivot (CPVT)
- Booster Station - DVD (DVD-BS-01)
- Gorman - North Pivot (GPVTN)
- ▲ Gorman - South Pivot (GPVTS)
- ▼ Ranch Pivot (RPVT)
- ⊕ Yang (YAU)

Notes:

1) Groundwater concentrations in picoCuries per liter (pCi/L)

**APPENDIX D
CONCENTRATION TRENDS FOR SELECT ANALYTES
FOR AGRICULTURAL TREATMENT UNITS**

THIRD QUARTER 2014 AGRICULTURAL UNITS MONITORING REPORT
PACIFIC GAS AND ELECTRIC COMPANY, HINKLEY COMPRESSOR STATION
HINKLEY, CALIFORNIA

Appendix E
Historical and Baseline Groundwater
Monitoring Data

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Cottrell (OU2)										
MW-55A	10/13/04		1.8	1.9	---	---	---	---	---	---
	12/08/04		0.99	ND (1.0)	---	---	---	---	---	---
	02/07/05		0.23	1.8	---	---	---	---	---	---
	04/13/05		1.4	2.2	---	---	---	---	---	---
	06/08/05		ND (0.2)	1.9	---	---	---	---	---	---
	08/19/05		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/13/05		ND (0.2)	1.3	---	---	---	---	---	---
	12/07/05		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/15/06		ND (0.2)	1.2	---	---	---	---	---	---
	04/19/06		ND (0.2)	1.8	---	---	---	---	---	---
	06/13/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/15/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/16/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	12/07/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/20/07		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/14/07		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/14/08		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/07/08		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/08/08		---	---	1.76	520	---	---	---	---
	08/04/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/13/10		0.21	ND (1.0)	---	---	---	---	---	---
	08/03/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	ND (0.10)	361	---	---	---	---
	10/27/10		ND (0.2)	ND (1.0)	ND (0.50)	341	---	---	---	---
	01/25/11		ND (0.2)	ND (1.0)	ND (1.00)	377J	---	---	---	0.0255
	05/05/11		ND (0.2)	ND (1.0)	ND (0.50)	412	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0286
	08/02/11		ND (0.2)	ND (1.0)	1.87	423	---	---	---	---
	11/01/11		ND (0.091)	ND (1.0)	ND (0.50)	442	---	---	---	---
	12/05/11		---	---	ND (0.50)	481	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-55A	01/16/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/16/12		---	---	ND (0.50)	489	---	---	---	---
	04/06/12		0.061	ND (1.0)	0.17	460	---	---	---	---
	07/12/12		ND (0.06)	ND (1.0)	0.26	540	---	---	---	---
	10/09/12		ND (0.06)	ND (1.0)	0.25	500	---	---	---	---
	01/17/13		1.3	1.4	1.20	540	---	---	---	---
	04/10/13		0.39	ND (1.0)	ND (0.50)	508	---	---	---	---
	04/10/13	FD	0.42	ND (1.0)	ND (0.50)	504	---	---	---	---
	07/31/13		ND (0.06)	ND (1.0)	ND (0.50)	512	---	---	---	---
	10/14/13		0.8	ND (1.0)	0.76	540	8.10	6.70	6.40	0.0394
	01/22/14		ND (0.06)	ND (1.0)	ND (0.50)	533	---	---	---	---
	04/16/14		---	---	---	---	6.37S	---	---	---
	04/16/14		0.48	ND (1.0)	0.66	530	8.67	ND (4.00)	8.00	---
	07/23/14		ND (0.06)	ND (1.0)	0.43	520	9.25	4.17	7.20	---
MW-55S	10/27/10		2.4	3.4	18.7	3,440	---	---	---	---
	01/13/11		3.2	3.8	---	---	---	---	---	---
	05/05/11		2.8	4.4	---	---	---	---	---	---
	05/10/11		---	---	23.8	3,310	---	---	---	ND (0.02)
	06/01/11		2.9	2.7	---	---	---	---	---	---
	08/02/11		2.8	3.5	---	---	---	---	---	---
	11/01/11		2.4	3.3	---	---	---	---	---	---
	12/05/11		---	---	22.9	3,590	---	---	---	---
	02/03/12		2.7	3.2	22.8	3,450	---	---	---	---
	04/24/12		2.6	2.7	23.6	3,730	---	---	---	---
	07/31/12		2.5	3.5	22.1	3,720	---	---	---	---
	10/01/12		2.8	3.1	20.0	3,600	---	---	---	---
	01/17/13		2.6	3.1	25.2	4,220	---	---	---	---
	04/10/13		2.6	3.1	25.2	3,830	---	---	---	---
	07/15/13		2.5	3.1	25.8	4,060	---	---	---	---
	10/14/13		2.6	3.1	25.8	4,000	58.0	23.0	59.0	0.0209
01/15/14		2.4	3.5	26.2	4,160	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-55S	01/15/14	FD	2.4	3.2	25.8	4,180	---	---	---	---
	04/16/14		2.9	3.3	24.0	3,900	65.3	13.3J	69.0	---
	04/16/14		---	---	---	---	47.3S	---	---	---
	07/23/14		2.7	2.8	24.0	4,000	70.3	13.3	65.0	---
MW-68D	04/24/09		7.2	6.1	8.50	1,100	---	---	---	---
	05/14/09		2.6	2.8	---	---	---	---	---	---
	05/14/09	FD	2.7	2.7	---	---	---	---	---	---
	08/04/09		6.8	7.3	---	---	---	---	---	---
	11/12/09		6.7	6.8	---	---	---	---	---	---
	02/15/10		4.4	4.9	---	---	---	---	---	---
	02/15/10	FD	4.5	5.1	---	---	---	---	---	---
	05/11/10		5.3	5.6	---	---	---	---	---	---
	08/03/10		6.6	6.0	---	---	---	---	---	---
	08/25/10		---	---	8.90J	1,170	---	---	---	---
	10/27/10		5.0	5.7	9.23	1,050	---	---	---	---
	01/25/11		4.0	4.1	9.37	1,010	---	---	---	0.0407
	05/02/11		3.5	4.4	10.2	1,000	---	---	---	---
	08/09/11		4.0	4.3	9.99	960	---	---	---	---
	11/01/11		3.7	4.0	9.15	986	---	---	---	---
	01/13/12		3.8	3.8	10.9	984	---	---	---	---
	04/09/12		8.1	8.0	12.2	1,250	---	---	---	---
	04/09/12	FD	8.0	8.8	12.6	1,100	---	---	---	---
	07/23/12		9.5	9.9	14.3	1,630	---	---	---	---
	10/17/12		7.9	8.5	14.3	1,850	---	---	---	---
10/17/12	FD	7.8	8.5	13.9	1,800	---	---	---	---	
01/24/13		7.2	7.6	26.3	2,250	---	---	---	---	
04/16/13		8.3	9.1	19.7	2,110	---	---	---	---	
07/30/13		7.6	8.9	15.4	2,350	---	---	---	---	
10/16/13		9.4	10.0	14.7	1,940	---	---	---	---	
01/20/14		8.4	9.4	13.8	1,660	---	---	---	---	
04/11/14		---	---	---	---	43.6S	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-68D	04/11/14		12.0	12.0	16.0	1,700	60.4	19.7	60.0	---
	07/18/14		12.0	11.0	18.0	1,800	70.8J	9.55	50.0	---
MW-68S	04/24/09		1.2	1.4	27.3	2,680	---	---	---	---
	05/14/09		0.42	ND (1.0)	---	---	---	---	---	---
	08/04/09		ND (0.2)	1.2	---	---	---	---	---	---
	11/12/09		0.22	1.1	---	---	---	---	---	---
	02/15/10		ND (1.1)	ND (1.0)	---	---	---	---	---	---
	05/11/10		ND (0.2)	2.2	---	---	---	---	---	---
	08/03/10		ND (0.2)	2.2	---	---	---	---	---	---
	08/25/10		---	---	50.0J	4,420	---	---	---	---
	10/27/10		0.35	2.2	56.4	4,590	---	---	---	---
	01/25/11		1.2	1.2	54.4	4,340	---	---	---	0.0592
	05/02/11		ND (1.0)	1.6	76.2	4,400	---	---	---	---
	08/09/11		ND (1.0)	1.7	54.2	4,220	---	---	---	---
	08/09/11	FD	ND (1.0)	1.6	49.9	4,220	---	---	---	---
	11/01/11		0.73	2.0	64.9	4,310	---	---	---	---
	01/13/12		ND (1.0)	1.2	50.9J	4,120	---	---	---	---
	04/09/12		0.82	1.6	56.1	3,680	---	---	---	---
	07/23/12		0.8	1.7	61.0	3,920	---	---	---	---
	10/17/12		0.41	1.7	53.9J	4,080	---	---	---	---
	01/24/13		1.2	2.9	59.7J	4,100	---	---	---	---
	04/16/13		0.43	1.4	52.5	4,040	---	---	---	---
	07/30/13		ND (0.76)	2.3	51.6	4,160	---	---	---	---
	10/16/13		0.85	1.6	49.2	3,650	---	---	---	---
	01/20/14		1.0	2.0	48.8	3,720	---	---	---	---
	04/11/14		1.9	2.3	38.0	3,200	55.7	6.96	64.0	---
	04/11/14		---	---	---	---	49.9S	---	---	---
	07/18/14		1.6	2.4	40.0	3,800	73.0J	9.07	55.0	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Desert View Dairy (OU2)										
DW-02	11/13/02		ND (0.2)	2.0	40.4	---	---	---	---	---
	01/24/03		ND (0.2)	2.9	---	3,200	---	---	---	---
	02/20/03		ND (0.2)	6.2	46.3	---	---	---	---	---
	04/17/03		ND (0.2)	3.7	50.1	3,430	---	---	---	ND (0.02)
	07/15/03		---	---	53.1	3,490	---	---	---	ND (0.02)
	07/15/03		0.2	2.8	---	---	---	---	---	---
	10/27/03		---	---	51.1	3,590	---	---	---	0.0226
	01/27/04		ND (0.2)	6.9	---	---	---	---	---	---
	01/27/04		---	---	62.2	3,590	---	---	---	ND (0.02)
	04/28/04		ND (0.2)	2.7	---	---	---	---	---	---
	04/28/04		---	---	62.5	3,770J	---	---	---	ND (0.02)
	07/13/04		ND (0.2)	1.2	---	---	---	---	---	---
	07/13/04		---	---	62.2	3,770	---	---	---	ND (0.02)
	10/13/04		ND (1.0)	ND (1.0)	69.3	3,910	---	---	---	0.0248
	01/17/05		ND (0.2)	2.0	63.2	3,340	---	---	---	0.0322
	02/04/05		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	04/15/05		ND (1.0)	3.0	62.5	3,520	---	---	---	0.0308
	07/14/05		---	---	68.7	4,100	---	---	---	ND (0.02)
	08/17/05		ND (1.0)	ND (1.0)	---	---	---	---	---	---
	10/14/05		ND (1.0)	4.0	89.1	3,770	---	---	---	0.0209
	12/06/05		ND (1.0)	2.1	---	---	---	---	---	---
	02/14/06		ND (1.0)	ND (2.0)	92.7	3,800	---	---	---	0.0269
	04/19/06		ND (1.0)	10.8	83.4	3,240	---	---	---	0.0364
	04/19/06	FD	ND (1.0)	12.6	80.0	3,740	---	---	---	0.0387
	06/13/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/14/06		ND (0.2)	ND (1.0)	76.6	3,810	---	---	---	0.0241
	10/16/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/16/06	FD	ND (0.2)	ND (1.0)	---	---	---	---	---	---
	12/08/06		ND (0.2)	ND (1.0)	77.8	3,520	---	---	---	0.0549
	12/08/06	FD	ND (0.2)	ND (1.0)	77.1	3,750	---	---	---	0.0478

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-02	02/14/07		ND (0.2)	ND (1.0)	81.4	3,640	---	---	---	0.0444
	04/11/07		ND (1.0)	2.9	86.4	3,870	---	---	---	ND (0.02)
	04/11/07	FD	ND (1.0)	3.0	87.2	3,800	---	---	---	ND (0.02)
	06/21/07		ND (1.0)	ND (1.0)	---	---	---	---	---	---
	08/16/07		ND (0.2)	ND (1.0)	90.8	3,920	---	---	---	0.0244
	10/15/07		ND (1.0)	ND (1.0)	---	---	---	---	---	---
	12/11/07		ND (0.2)	ND (1.0)	97.3	4,170	---	---	---	ND (0.02)
	02/12/08		ND (1.0)	ND (1.0)	102	3,780	---	---	---	ND (0.02)
	04/11/08		ND (1.0)	ND (1.0)	96.7	3,740	---	---	---	0.0334
	06/09/08		1.4	2.1	91.0	3,600	---	---	---	---
	08/07/08		ND (1.1)	ND (1.0)	102J	3,910	---	---	---	0.0419
	10/09/08		---	---	95.0	4,000	---	---	---	---
	11/05/08		0.44	ND (1.0)	102	2,830	---	---	---	0.0261
	02/04/09		ND (1.1)	ND (1.0)	97.5	3,750	---	---	---	ND (0.02)
	02/04/09	FD	ND (1.1)	ND (1.0)	99.1	4,030	---	---	---	ND (0.02)
	05/13/09		0.32	ND (1.0)	94.8J	3,770	---	---	---	ND (0.02)
	08/07/09		0.38	ND (1.0)	---	3,730	---	---	---	0.0257
	08/10/09		---	---	88.0	---	---	---	---	---
	11/10/09		ND (0.2)	ND (1.0)	91.6	3,780	---	---	---	0.023J
	02/09/10		ND (0.2)	ND (1.0)	86.6	4,100	---	---	---	0.0601
	05/12/10		0.46	ND (1.0)	72.1	3,420	---	---	---	---
	08/19/10		ND (0.52)	ND (1.0)	58.1	2,790	---	---	---	ND (0.02)
	10/28/10		0.31	ND (1.0)	71.3	3,460	---	---	---	0.0204
	01/26/11		1.1	ND (1.0)	49.8	3,160	---	---	---	ND (0.02)
	05/05/11		0.7	1.0	40.0J	3,300	---	---	---	ND (0.02)
	07/28/11		0.67	ND (1.0)	47.4	3,060	---	---	---	ND (0.02)
	11/01/11		ND (1.0)	ND (1.1)	40.1	3,080	---	---	---	ND (0.02)
	11/01/11	FD	ND (1.0)	ND (1.1)	41.7	3,080	---	---	---	ND (0.02)
	01/12/12		0.78	1.0	29.7	2,930	---	---	---	ND (0.02)
	04/10/12		0.89	1.4	36.2	2,680	---	---	---	0.0314
	07/23/12		0.86	1.0	35.4	2,870	---	---	---	ND (0.02)

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-02	10/17/12		0.93	ND (1.0)	53.3	2,840	---	---	---	0.0208J
	02/01/13		0.93	1.2	31.2	2,720	---	---	---	ND (0.02)
	04/16/13		1.1	1.2	30.4	2,680	---	---	---	ND (0.02)
	07/31/13		1.1	1.2	27.6	2,770	---	---	---	ND (0.02)
	10/15/13		1.2	1.2	98.9	3,420	---	---	---	0.0338
	01/24/14		1.2	1.2	113	3,530	---	---	---	ND (0.02)
	01/24/14	FD	1.3	1.3	111	3,520	---	---	---	ND (0.02)
	04/15/14		1.5	1.2	37.0	3,000J	90.7	13.1	77.0	---
	04/15/14		---	---	---	---	44.6S	---	---	---
	07/22/14		1.4	1.3	32.0	2,900	79.5	13.6	77.0	---
MW-127S1	08/01/11		9.2	10.0	31.6	3,760	---	---	---	---
	08/11/11		4.0	3.9	34.0	3,840	---	---	---	---
	08/11/11	FD	4.0	3.8	33.8	3,820	---	---	---	---
	09/14/11		3.1	3.7	---	---	---	---	---	---
	10/27/11		2.2	2.9	---	---	---	---	---	---
	11/18/11		2.0	2.6	---	---	---	---	---	---
	01/31/12		1.7	3.3	---	---	---	---	---	---
	03/13/12		1.6	2.3	34.1	4,080	---	---	---	---
	04/26/12		1.7	2.3	33.9	4,270	---	---	---	---
	07/30/12		1.7	2.0	---	---	---	---	---	---
	10/11/12		1.1	1.4	---	---	---	---	---	---
	02/21/13		1.8	1.7	---	---	---	---	---	---
	04/15/13		1.8	2.2	---	---	---	---	---	---
	07/11/13		1.5	2.6	---	---	---	---	---	---
	10/11/13		1.5	2.1	---	---	---	---	---	---
	01/21/14		1.8	3.6	---	---	---	---	---	---
	03/06/14		2.1	2.5	---	---	---	---	---	---
	04/16/14		2.2	2.5	29.0	4,100	82.6	17.5J	81.0	---
	04/16/14		---	---	---	---	51.1S	---	---	---
	04/16/14	FD	---	---	---	---	47.8S	---	---	---
04/16/14	FD	2.2	2.4	30.0	4,000	81.4	19.3J	81.0	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-127S1	07/22/14		2.1	2.5	29.0	4,500	71.7	11.3	81.0	---
	07/22/14	FD	2.1	2.6	29.0	4,500	87.2	15.7	75.0	---
MW-127S2	08/01/11		0.68	ND (1.0)	22.7	2,870	---	---	---	---
	08/11/11		1.1	1.3	21.4	2,940	---	---	---	---
	09/14/11		1.1	2.0	---	---	---	---	---	---
	10/27/11		1.2	1.5	---	---	---	---	---	---
	11/18/11		1.2	1.5	---	---	---	---	---	---
	11/18/11	FD	1.2	1.4	---	---	---	---	---	---
	01/31/12		1.1	2.0	---	---	---	---	---	---
	04/26/12		1.1	1.4	20.8	3,140	---	---	---	---
	07/30/12		1.2	1.4	---	---	---	---	---	---
	10/11/12		1.3	1.5	---	---	---	---	---	---
	02/21/13		1.3	1.1	---	---	---	---	---	---
	04/15/13		1.2	1.5	---	---	---	---	---	---
	07/11/13		1.2	1.7	---	---	---	---	---	---
	07/11/13	FD	1.2	2.3	---	---	---	---	---	---
	10/11/13		1.2	1.6	---	---	---	---	---	---
	01/21/14		1.2	1.9	---	---	---	---	---	---
	04/16/14		---	---	---	---	34.7S	---	---	---
04/16/14		1.3	1.4	19.0	3,000	51.4	10.9J	50.0	---	
07/22/14		1.3	1.5	19.0	3,500	53.0	5.92	45.0	---	
MW-170S	12/06/12		2.3	2.8	89.3	3,920	---	---	---	---
	01/22/13		1.8	2.7	---	---	---	---	---	---
	04/15/13		1.9	2.6	---	---	---	---	---	---
	04/15/13	FD	1.9	2.7	---	---	---	---	---	---
	07/18/13		1.9	2.3	---	---	---	---	---	---
	10/15/13		1.8	2.6	---	---	---	---	---	---
	01/22/14		2.0	2.1	---	---	---	---	---	---
	04/15/14		---	---	---	---	68.7S	---	---	---
	04/15/14		2.2	2.1	70.0	4,100	123	9.58	86.0	---
	07/21/14		2.0	2.5	68.0	3,600	89.8	6.61	86.0	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-28A	06/20/03		0.82	2.5	---	---	---	---	---	---
	08/05/03		2.5	3.4	---	---	---	---	---	---
	08/24/04		2.1	3.1	---	---	---	---	---	---
	02/08/05		2.9	5.1	---	---	---	---	---	---
	08/18/05		1.8	1.9	---	---	---	---	---	---
	02/15/06		16.0	18.3	---	---	---	---	---	---
	06/12/06		17.5	19.9	---	---	---	---	---	---
	08/09/06		3.6	3.2	---	---	---	---	---	---
	10/17/06		1.6	1.5	---	---	---	---	---	---
	12/07/06		25.7	24.3	---	---	---	---	---	---
	02/14/07		19.5	16.5	---	---	---	---	---	---
	04/13/07		8.2	8.7	---	---	---	---	---	---
	06/18/07		11.8	12.3	---	---	---	---	---	---
	08/16/07		4.3	4.2	---	---	---	---	---	---
	10/16/07		15.0	14.3	---	---	---	---	---	---
	12/10/07		22.5	24.9	---	---	---	---	---	---
	02/12/08		12.6	13.8	---	---	---	---	---	---
	04/10/08		19.9	19.7	---	---	---	---	---	---
	06/11/08		12.5	15.2	9.29	1,230	---	---	---	---
	08/12/08		7.1	5.9	---	---	---	---	---	---
	11/04/08		1.1	1.2	---	---	---	---	---	---
	02/03/09		38.2	35.0	---	---	---	---	---	---
	03/05/09		44.4	35.9	---	---	---	---	---	---
	05/13/09		32.9	31.9	11.3	1,190	---	---	---	---
	08/10/09		14.1	14.9	11.0	1,500	---	---	---	---
	11/17/09		11.8	12.3	---	---	---	---	---	---
	02/10/10		15.1	14.9	---	1,180	---	---	---	---
	05/11/10		6.5	6.5	---	---	---	---	---	---
	08/03/10		4.4	4.0	---	1,420	---	---	---	---
	10/26/10		3.0	3.8	---	---	---	---	---	---
	01/25/11		23.8	21.9	---	1,040	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-28A	05/03/11		14.4	15.9	10.6	1,110	---	---	---	0.0209
	08/03/11		3.2	4.1	---	1,160	---	---	---	---
	11/02/11		4.6	5.4	---	---	---	---	---	---
	01/30/12		27.3	29.2	---	1,190	---	---	---	---
	04/25/12		9.3	10.8	---	---	---	---	---	---
	07/24/12		3.4	3.9	---	928	---	---	---	---
	10/11/12		2.8	3.3	---	---	---	---	---	---
	01/16/13		3.1	3.6	---	854	---	---	---	---
	04/11/13		20.5	20.9	---	---	---	---	---	---
	04/11/13	FD	20.6	21.2	---	---	---	---	---	---
	01/15/14		17.5	23.5	---	1,110	---	---	---	---
	04/11/14		23.0	23.0	---	1,100	34.4	4.76	27.0	---
04/11/14		---	---	---	---	21.6S	---	---	---	
MW-28B	06/19/03		37.5	25.3	---	---	---	---	---	---
	06/19/03	FD	38.0	36.5	---	---	---	---	---	---
	08/05/03		35.5	37.1	---	---	---	---	---	---
	10/28/03		28.7	29.0	---	---	---	---	---	---
	12/03/03		30.7	30.5	---	---	---	---	---	---
	02/16/04		35.1	40.0	---	---	---	---	---	---
	04/26/04		37.9	31.1	---	---	---	---	---	---
	04/26/04	FD	37.6	31.0	---	---	---	---	---	---
	06/16/04		47.2	46.6	---	---	---	---	---	---
	08/24/04		50.2	56.6	---	---	---	---	---	---
	10/13/04		54.5	48.4	---	---	---	---	---	---
	10/13/04	FD	53.5	45.9	---	---	---	---	---	---
	12/07/04		54.3	55.2	---	---	---	---	---	---
	12/07/04	FD	55.0	55.3	---	---	---	---	---	---
	02/08/05		50.3	55.7	---	---	---	---	---	---
	04/14/05		49.1	49.8	---	---	---	---	---	---
04/14/05	FD	49.1	50.7	---	---	---	---	---	---	
06/07/05		48.0	47.9	---	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-28B	06/07/05	FD	46.9	49.1	---	---	---	---	---	---
	08/16/05		50.1	50.1	---	---	---	---	---	---
	10/13/05		48.0	49.4	---	---	---	---	---	---
	10/13/05	FD	49.1	50.9	---	---	---	---	---	---
	12/07/05		49.7	54.5	13.0	1,130	---	---	---	---
	02/15/06		48.7	51.1	---	---	---	---	---	---
	04/18/06		57.1	52.1	---	---	---	---	---	---
	06/12/06		50.8	56.3	---	---	---	---	---	---
	08/09/06		58.2	47.0	---	---	---	---	---	---
	10/17/06		54.7	46.9	14.0	1,140	---	---	---	---
	12/05/06		55.8	49.6	14.2	1,150	---	---	---	---
	02/23/07		59.7	52.4	---	---	---	---	---	---
	04/13/07		56.2	61.6	---	---	---	---	---	---
	06/18/07		52.0	48.1	---	---	---	---	---	---
	08/16/07		57.1	52.2	---	---	---	---	---	---
	10/16/07		64.0	56.6	---	---	---	---	---	---
	12/10/07		51.8	56.8	---	---	---	---	---	---
	02/12/08		52.5	51.1	---	---	---	---	---	---
	04/10/08		43.1	50.6	---	---	---	---	---	---
	06/11/08		59.3	51.5	14.3	856	---	---	---	---
	08/13/08		49.7	52.3	---	---	---	---	---	---
	11/06/08		49.4	48.0	---	---	---	---	---	---
	02/03/09		47.9	42.4	---	---	---	---	---	---
	05/13/09		47.6	44.4	14.2	1,090	---	---	---	---
	08/10/09		53.0	48.0	12.0	1,030	---	---	---	---
	11/17/09		53.4	49.5	---	---	---	---	---	---
	02/10/10		45.2	41.8	---	1,130	---	---	---	---
	05/11/10		46.9	50.5	---	---	---	---	---	---
	08/03/10		54.3	49.0	---	---	---	---	---	---
	08/06/10		---	---	---	1,080	---	---	---	---
	10/26/10		48.9	46.3	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-28B	01/25/11		49.5	44.6	---	956	---	---	---	---
	01/25/11	FD	50.9	46.3	---	1,070	---	---	---	---
	05/03/11		48.5	54.0	14.3	1,090	---	---	---	ND (0.02)
	08/03/11		47.8	51.0	---	1,120	---	---	---	---
	11/03/11		43.6	44.5	---	---	---	---	---	---
	01/30/12		43.8	45.3	---	1,080	---	---	---	---
	04/25/12		40.4	41.7	---	---	---	---	---	---
	07/24/12		35.6	34.5	---	1,030	---	---	---	---
	10/11/12		36.2	37.1	---	---	---	---	---	---
	01/16/13		35.5	37.3	---	1,030	---	---	---	---
	04/11/13		34.1	34.2	---	---	---	---	---	---
	07/11/13		30.7	33.2	---	1,020	---	---	---	---
	10/09/13		28.0	25.0	---	---	---	---	---	---
	01/15/14		23.9	25.3	---	922	---	---	---	---
	04/11/14		---	---	---	---	17.0S	---	---	---
04/11/14		24.0	22.0	---	910	34.4	8.56	24.0	---	
07/25/14		14.0	15.0	9.40	820	17.0	6.63	18.0	---	
MW-29	06/20/03		ND (0.2)	2.0	---	---	---	---	---	---
	08/07/03		0.9	2.4	---	---	---	---	---	---
	07/14/04		4.7	5.2	---	---	---	---	---	---
	07/14/04		---	---	14.9	2,720	---	---	---	ND (0.02)
	08/31/04		5.1	8.2	---	---	---	---	---	---
	02/04/05		12.3	13.0	---	---	---	---	---	---
	04/12/05		15.0	15.4	---	---	---	---	---	---
	06/08/05		13.9	16.8	---	---	---	---	---	---
	08/17/05		13.2	13.0	15.7	2,280	---	---	---	---
	10/11/05		14.4	12.2	15.2	2,350	---	---	---	---
	12/07/05		16.0	17.7	---	---	---	---	---	---
02/14/06		19.4	19.0	16.5	2,100	---	---	---	---	
04/18/06		18.0	21.1	16.8	2,300	---	---	---	---	
06/13/06		18.1	15.0	---	---	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-29	06/13/06	FD	16.7	14.9	---	---	---	---	---	---
	08/14/06		14.1	14.1	18.2	3,660	---	---	---	---
	10/18/06		18.1	15.9	---	---	---	---	---	---
	12/04/06		20.0	16.2	19.0	2,770	---	---	---	---
	02/14/07		20.5	18.8	16.8	2,330	---	---	---	---
	04/12/07		21.2	23.3	18.4	2,250	---	---	---	---
	06/18/07		21.2	19.8	---	---	---	---	---	---
	08/16/07		20.0	21.2	17.0	2,270	---	---	---	---
	10/17/07		21.9	23.1	---	---	---	---	---	---
	12/10/07		22.5	22.9	16.8	2,360	---	---	---	---
	02/13/08		23.9	27.0	16.9	2,220	---	---	---	---
	04/10/08		24.9	23.4	16.6	2,230	---	---	---	---
	06/11/08		25.2	26.1	16.6	2,110	---	---	---	---
	08/07/08		17.4	18.3	16.8	3,400	---	---	---	---
	08/07/08	FD	18.7	19.6	16.8	3,570	---	---	---	---
	10/08/08		---	---	16.3	3,700	---	---	---	---
	11/06/08		10.6	10.8	17.2	4,100	---	---	---	---
	02/04/09		25.8	22.9	15.8	2,060	---	---	---	---
	05/14/09		24.3	24.2	15.7	2,040	---	---	---	---
	08/11/09		16.3	20.0	15.0J	3,600	---	---	---	---
	11/11/09		20.2	22.2	15.1	2,440	---	---	---	---
	11/11/09	FD	20.2	21.4	15.8	2,400	---	---	---	---
	02/09/10		23.2	21.9	15.5	2,090	---	---	---	---
	02/09/10	FD	24.0	22.7	15.2	2,100	---	---	---	---
	05/12/10		24.9	24.4	14.7	1,980	---	---	---	---
	08/19/10		19.4	18.8	19.5	3,330	---	---	---	---
10/27/10		11.8	12.3	29.3	4,260	---	---	---	---	
01/26/11		19.4	19.1	20.8	3,010	---	---	---	---	
05/05/11		12.1	13.5	24.7	4,200	---	---	---	---	
05/09/11		---	---	---	---	---	---	---	0.0212	
07/28/11		2.2	2.6	26.5	4,620	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-29	11/02/11		1.6	2.2	36.6	5,870	---	---	---	---
	11/02/11	FD	1.7	2.2	40.6	5,820	---	---	---	---
	01/12/12		2.2	4.0	28.3	5,080	---	---	---	---
	04/09/12		1.5	2.1	12.0	4,400	---	---	---	---
	07/23/12		1.1	1.7	18.9	4,150	---	---	---	---
	07/23/12	FD	1.0	1.7	19.2	3,920	---	---	---	---
	10/17/12		1.6	1.4	23.4	5,780	---	---	---	---
	01/22/13		1.5	1.7	23.4	5,400	---	---	---	---
	01/22/13	FD	1.5	1.7	21.8	5,460	---	---	---	---
	04/16/13		1.2	1.6	11.0	4,380	---	---	---	---
	07/30/13		0.86	1.7	8.36	3,960	---	---	---	---
	10/15/13		1.9	2.0	15.9	3,940	---	---	---	---
	01/21/14		3.3	4.0	18.1	3,590	---	---	---	---
	01/21/14	FD	3.3	4.0	18.5	3,550	---	---	---	---
	04/15/14		---	---	---	---	83.2S	---	---	---
	04/15/14		1.3	1.4	---	4,100	202	12.5	150	---
	04/15/14	FD	---	---	---	---	90.8S	---	---	---
04/15/14	FD	1.2	1.3	---	4,100	207	12.5	150	---	
07/21/14		1.1	1.5	10.0	3,700	209	ND (5.94)	140	---	
MW-31	06/20/03		0.43	3.3	---	---	---	---	---	---
	07/15/03		1.6	3.5	---	---	---	---	---	---
	08/08/03		1.5	3.2	---	---	---	---	---	---
	02/04/04		---	ND (10.0)	23.0	---	---	---	---	---
	04/29/04		3.3	4.8	---	---	---	---	---	---
	07/14/04		---	---	18.5	3,480	---	---	---	ND (0.02)
	07/14/04		7.4	7.7	---	---	---	---	---	---
	08/31/04		10.2	11.4	---	---	---	---	---	---
	10/14/04		14.2	11.9	18.1	2,930J	---	---	---	---
	12/07/04		16.4	17.5	---	---	---	---	---	---
	02/03/05		20.1	18.6	19.0	2,730J	---	---	---	---
02/03/05	FD	20.2	19.5	18.8	2,780J	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-31	04/12/05		23.1	24.4	18.8	2,540	---	---	---	---
	04/12/05	FD	23.1	24.3	18.7	2,520	---	---	---	---
	06/08/05		26.8	29.2	---	---	---	---	---	---
	06/08/05	FD	26.9	28.4	---	---	---	---	---	---
	08/16/05		28.1	26.0	18.6	2,260	---	---	---	---
	08/16/05	FD	24.3	24.8	18.3	2,280	---	---	---	---
	10/11/05		29.1	25.8	17.6	2,180	---	---	---	---
	10/11/05	FD	29.1	25.0	18.0	2,250	---	---	---	---
	12/09/05		32.0	31.5	---	---	---	---	---	---
	12/09/05	FD	32.1	28.0	---	---	---	---	---	---
	02/14/06		29.6	32.6	19.2	2,110	---	---	---	---
	02/14/06	FD	30.0	31.4	18.6	2,110	---	---	---	---
	04/18/06		24.5	27.9	18.8	2,350	---	---	---	---
	04/18/06	FD	24.5	27.4	19.0	2,460	---	---	---	---
	06/13/06		28.9	23.8	---	---	---	---	---	---
	08/14/06		30.3	26.6	18.3	2,000	---	---	---	---
	10/18/06		15.7	13.6	---	---	---	---	---	---
	12/04/06		32.6	26.7	19.2	2,100	---	---	---	---
	02/15/07		30.6	28.3	18.8	2,060	---	---	---	---
	04/09/07		34.1	37.8	18.6	1,880	---	---	---	---
	06/18/07		24.1	22.2	---	---	---	---	---	---
	08/16/07		19.3	20.2	17.8	2,320	---	---	---	---
	10/16/07		19.4	17.3	---	---	---	---	---	---
	12/07/07		17.5	17.1	17.6	3,120	---	---	---	---
	02/13/08		18.0	17.0	18.0	2,910	---	---	---	---
	04/09/08		21.1	20.5	18.3	2,370	---	---	---	---
	04/09/08	FD	21.2	20.7	17.9	2,420	---	---	---	---
	06/10/08		19.7	17.8	17.4	2,650	---	---	---	---
	08/07/08		19.7	19.5	17.9	2,480	---	---	---	---
	10/09/08		---	---	17.0	2,600	---	---	---	---
	10/09/08	FD	---	---	16.7	2,700	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-31	02/04/09		18.6	18.7	17.4	2,670	---	---	---	---
	05/14/09		14.9	16.2	18.2	2,860	---	---	---	---
	08/11/09		19.2	17.9	15.0J	2,560	---	---	---	---
	11/11/09		16.0	15.7	18.0	2,740	---	---	---	---
	02/09/10		14.8	15.5	19.2	2,680	---	---	---	---
	05/12/10		14.7	15.4	22.2	2,850	---	---	---	---
	08/19/10		16.3	15.7	21.5	2,720	---	---	---	---
	10/27/10		15.5	15.9	19.3	2,630	---	---	---	---
	01/26/11		15.8	16.1	20.6	2,630	---	---	---	---
	05/02/11		15.7	14.6	19.5	2,660	---	---	---	---
	07/28/11		16.6	17.5	21.4	2,600	---	---	---	---
	11/01/11		16.7	17.1	19.2	2,490	---	---	---	---
	01/13/12		10.4	12.2	20.0	2,870	---	---	---	---
	04/09/12		13.9	13.3	20.4	2,340	---	---	---	---
	07/23/12		11.2	11.7	21.9	2,780	---	---	---	---
	10/17/12		8.7	8.6	30.2J	3,240	---	---	---	---
	10/17/12	FD	8.6	8.4	23.0J	3,180	---	---	---	---
	01/22/13		13.8	13.3	23.4	2,880	---	---	---	---
	04/15/13		17.4	16.5	20.8	2,550	---	---	---	---
	07/30/13		5.1	5.8	20.9	3,280	---	---	---	---
07/30/13	FD	5.0	5.9	21.7	3,290	---	---	---	---	
10/15/13		4.1	4.7	19.2	3,220	---	---	---	---	
01/21/14		3.8	4.3	18.3	3,060	---	---	---	---	
04/14/14		3.7	3.6	13.0	3,100J	104	12.3	75.0	---	
04/14/14		---	---	---	---	55.5S	---	---	---	
07/17/14		3.2	3.4	14.0	2,900	36.7J	ND (6.29)	69.0	---	
MW-42B1	03/23/04		30.8	34.8	---	---	---	---	---	---
	03/23/04	FD	31.0	37.2	---	---	---	---	---	---
	04/29/04		28.2	30.0	---	---	---	---	---	---
	09/01/04		29.8	36.3	---	---	---	---	---	---
	10/14/04		27.4	22.9	17.0	1,770J	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-42B1	02/03/05		25.4	24.4	16.2	1,640J	---	---	---	---
	04/12/05		28.0	29.0	16.5	1,600	---	---	---	---
	08/16/05		26.5	26.2	17.2	1,760	---	---	---	---
	10/11/05		29.0	28.2	16.0	1,700	---	---	---	---
	02/14/06		34.9	37.4	17.8	1,690	---	---	---	---
	04/19/06		38.2	42.8	16.0	1,500	---	---	---	---
	08/14/06		45.6	37.2	15.6	1,440	---	---	---	---
	12/06/06		39.3	34.1	17.2	1,360	---	---	---	---
	02/15/07		34.6	31.6	17.5	1,440	---	---	---	---
	04/12/07		33.5	37.6	17.5	1,540	---	---	---	---
	08/16/07		32.0	30.9	16.3	1,460	---	---	---	---
	12/10/07		30.0	31.0	16.1	1,620	---	---	---	---
	02/13/08		29.2	28.3	15.6	1,500	---	---	---	---
	04/09/08		28.9	28.0	16.4	1,560	---	---	---	---
	08/13/08		30.5	30.4	15.6	1,450	---	---	---	---
	10/08/08		---	---	14.5	1,400	---	---	---	---
	11/06/08		29.7	29.1	15.9	1,400	---	---	---	---
	02/04/09		29.6	30.1	15.6	1,570	---	---	---	---
	05/14/09		27.9	25.4	16.3	1,580	---	---	---	---
	08/11/09		29.2	34.6	14.0J	1,450	---	---	---	---
	11/11/09		26.3	26.7	15.8	1,380	---	---	---	---
	02/09/10		24.4	28.4	17.0	1,500	---	---	---	---
	05/12/10		27.8	25.8	15.4	1,400	---	---	---	---
	08/19/10		33.7	29.2	22.9	1,370	---	---	---	---
	10/27/10		30.7	30.6	14.9	1,220	---	---	---	---
	01/26/11		30.4	31.4	15.3J	1,300J	---	---	---	---
	05/06/11		31.4	32.4	14.7	1,330	---	---	---	---
	08/08/11		37.3	33.8	16.0	1,260	---	---	---	---
	11/01/11		38.3	36.3	16.2	1,220	---	---	---	---
	11/01/11	FD	38.4	37.4	15.6	1,240	---	---	---	---
	01/13/12		31.5	32.6	16.4	1,300	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-42B1	04/09/12		35.5	33.2	16.5	1,170	---	---	---	---
	04/09/12	FD	35.5	33.8	15.1	1,250	---	---	---	---
	07/24/12		38.4	35.0	14.6	1,250	---	---	---	---
	10/17/12		38.5	37.0	15.3	1,260	---	---	---	---
	01/24/13		36.6	39.5	14.5	1,320	---	---	---	---
	01/24/13	FD	36.5	40.1	13.3	1,270	---	---	---	---
	04/16/13		37.4	35.0	13.7	1,310	---	---	35.6	---
	07/31/13		36.7	38.7	14.3	1,280	---	---	---	---
	10/14/13		37.5	35.8	14.1	1,320	---	---	---	---
	01/24/14		34.4	33.6	16.4	1,300	---	---	---	---
	04/14/14		30.0	29.0	---	1,500	55.4	10.8	48.0	---
	04/14/14		---	---	---	---	30.6S	---	---	---
	07/25/14		33.0	33.0	14.0	1,300	31.8J	7.83	44.0	---
MW-42B2	03/11/04		42.8	42.3	---	---	---	---	---	---
	04/29/04		38.3J	44.2	---	---	---	---	---	---
	04/29/04	FD	38.4	43.8	---	---	---	---	---	---
	09/01/04		34.3	39.1	---	---	---	---	---	---
	09/01/04	FD	38.0	41.3	---	---	---	---	---	---
	10/14/04		34.1	34.3	15.7	1,420J	---	---	---	---
	02/03/05		32.8	31.8	15.4	1,510J	---	---	---	---
	02/03/05	FD	30.6	29.2	15.1	1,460J	---	---	---	---
	04/12/05		36.2	36.1	14.8	1,370	---	---	---	---
	08/16/05		28.8	28.6	18.0	1,630	---	---	---	---
	10/11/05		30.1	28.5	16.7	1,600	---	---	---	---
	02/14/06		29.7	31.9	15.3	1,360	---	---	---	---
	04/19/06		29.8	35.8	15.7	1,310	---	---	---	---
	08/14/06		29.9	27.4	14.0	1,210	---	---	---	---
	08/14/06	FD	38.3	25.2	14.0	1,150	---	---	---	---
12/06/06		27.5	22.8	23.4	986	---	---	---	---	
02/15/07		23.8	23.6	14.4	1,100	---	---	---	---	
02/15/07	FD	23.9	23.9	14.4	1,190	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-42B2	04/12/07		22.7	25.0	15.0	1,220	---	---	---	---
	08/16/07		21.1	21.0	14.7	1,150	---	---	---	---
	12/10/07		20.3	24.9	13.7	1,310	---	---	---	---
	02/13/08		20.2	18.6	14.1	1,190	---	---	---	---
	04/09/08		21.5	20.9	15.1	1,180	---	---	---	---
	08/13/08		21.7	21.4	14.5	1,160	---	---	---	---
	10/08/08		---	---	12.9	1,100	---	---	---	---
	11/06/08		23.5	22.5	14.4	1,090	---	---	---	---
	11/06/08	FD	23.5	22.8	13.2	1,060	---	---	---	---
	02/04/09		26.8	25.4	13.9	1,090	---	---	---	---
	03/05/09		26.6	21.5	---	---	---	---	---	---
	05/14/09		26.8	27.4	15.4	1,120	---	---	---	---
	08/11/09		31.0	32.3	13.0J	1,130	---	---	---	---
	11/11/09		34.7	34.1	13.9	1,140	---	---	---	---
	02/09/10		31.4	31.0	14.1	1,070	---	---	---	---
	05/12/10		36.1	33.1	13.7	1,100	---	---	---	---
	05/12/10	FD	36.8	35.9	---	---	---	---	---	---
	08/19/10		43.2	41.8	13.2	1,150	---	---	---	---
	08/19/10	FD	45.6	37.8	14.2	1,120	---	---	---	---
	10/27/10		42.1	43.4	12.8	1,090	---	---	---	---
	10/27/10	FD	43.0	42.8	13.5	1,100	---	---	---	---
	01/25/11		44.8	45.3	12.6	924J	---	---	---	---
	01/25/11	FD	44.1	44.5	13.7J	1,110J	---	---	---	---
	05/06/11		49.2	46.8	14.6	1,150	---	---	---	---
	08/08/11		50.0	48.6	13.4	1,010	---	---	---	---
	11/01/11		51.6	49.9	13.1	1,200	---	---	---	---
	01/13/12		54.6	53.9	13.3	1,120	---	---	---	---
	04/09/12		50.2	48.3	13.0	1,130	---	---	---	---
	07/24/12		49.6	47.3	13.0	1,140	---	---	---	---
	10/17/12		49.2	52.0	12.2	1,430	---	---	---	---
	01/24/13		52.4	54.4	12.7	1,070	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-42B2	04/15/13		50.4	52.1	12.0	1,220	---	---	---	---
	07/31/13		47.6	49.2	12.6	1,150	---	---	---	---
	10/14/13		48.6	43.0	12.9	1,230	---	---	---	---
	01/24/14		47.2	47.6	14.3	1,160	---	---	---	---
	01/24/14	FD	46.9	45.2	14.1	1,140	---	---	---	---
	04/14/14		49.0	47.0	---	1,200	50.0J	8.94	44.0	---
	04/14/14	FD	49.0	48.0	---	1,200	65.1J	10.0	41.0	---
	07/25/14		45.0	48.0	12.0	1,200	45.4	9.41	46.0	---
MW-63	09/06/06		1.4	1.5	---	---	---	---	---	---
	12/13/06		0.48	ND (1.0)	29.9	4,880	---	---	---	---
	02/20/07		1.4	2.0	---	---	---	---	---	---
	08/22/07		1.3	1.7	---	---	---	---	---	---
	10/16/07		ND (1.2)	1.8	---	---	---	---	---	---
	12/06/07		1.2	1.7	---	---	---	---	---	---
	02/15/08		1.4	1.6	---	---	---	---	---	---
	02/15/08	FD	1.4	1.5	---	---	---	---	---	---
	04/08/08		1.3	2.2	---	---	---	---	---	---
	04/08/08	FD	1.4	2.0	---	---	---	---	---	---
	06/10/08		1.8	1.8	49.1	4,720	---	---	---	---
	08/06/08		1.2	ND (1.0)	---	---	---	---	---	---
	10/07/08		---	---	47.5	4,700	---	---	---	---
	10/07/08	FD	---	---	47.5	4,400	---	---	---	---
	08/10/09		1.3	2.9	54.0	---	---	---	---	---
	02/16/10		ND (1.1)	1.1	---	---	---	---	---	---
	08/05/10		0.82	1.8	---	---	---	---	---	---
	08/26/10		---	---	57.0	4,030	---	---	---	---
	10/27/10		0.73	1.6	65.0	3,780	---	---	---	---
	01/26/11		1.4	1.5	71.6	3,640	---	---	---	---
05/05/11		1.1	1.4	84.6	3,870	---	---	---	---	
05/10/11		---	---	---	---	---	---	---	ND (0.02)	
08/09/11		ND (1.0)	1.4	81.5	3,500	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-63	11/01/11		0.91	1.1	72.6	3,770	---	---	---	---
	01/16/12		0.93	1.7	70.2	3,540	---	---	---	---
	04/09/12		0.84	1.3	61.1	2,730	---	---	---	---
	07/24/12		0.99	1.5	50.7	3,100	---	---	---	---
	10/17/12		0.96	1.1	47.1	3,150	---	---	---	---
	01/24/13		1.1	1.8	42.6J	3,140	---	---	---	---
	04/16/13		1.0	1.4	33.6	2,900	---	---	---	---
	07/31/13		0.98	2.3	32.2	3,890	---	---	---	---
	10/14/13		0.99	1.1	41.4	3,100	---	---	---	---
	10/14/13	FD	0.98	1.1	40.4	3,160	---	---	---	---
	01/22/14		1.2	1.3	38.8	3,030	---	---	---	---
	04/15/14		---	---	---	---	63.7S	---	---	---
	04/15/14		1.0	1.4	27.0	2,900J	117	18.3	84.0	---
	04/15/14	FD	1.0	1.4	26.0	2,900J	124	17.2	83.0	---
	04/15/14	FD	---	---	---	---	52.6S	---	---	---
	07/21/14		1.1	1.7	24.0	2,800	105J	ND (5.16)	88.0	---
	07/21/14	FD	1.1	1.6	24.0	2,800	75.6J	9.33	89.0	---
MW-71D	08/04/09		1.0	ND (1.0)	---	---	---	---	---	---
	11/12/09		1.7	1.9	---	---	---	---	---	---
	02/15/10		0.65	ND (1.0)	---	---	---	---	---	---
	05/11/10		0.64	ND (1.0)	---	---	---	---	---	---
	08/03/10		0.66	1.1	---	---	---	---	---	---
	08/25/10		---	---	1.90J	607	---	---	---	---
	10/28/10		2.6	2.6	2.64	626	---	---	---	---
	01/25/11		3.7	3.4	3.04	690	---	---	---	0.0235
	04/27/11		2.1	2.9	1.32	445	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0363
	08/09/11		2.5	2.6	1.67	544	---	---	---	---
	11/01/11		3.0	2.8	ND (1.00)	303	---	---	---	---
	01/17/12		1.8	2.0	0.807	411	---	---	---	---
01/17/12	FD	1.8	2.0	0.817	398	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-71D	04/10/12		1.9	2.0	0.579J	345	---	---	---	---
	07/30/12		1.6	2.0	ND (0.50)	271	---	---	---	---
	10/17/12		1.6	2.1	ND (0.50)	260	---	---	---	---
	01/24/13		0.48	ND (1.0)	ND (0.50)	300	---	---	---	---
	04/11/13		2.7	2.9	3.70	746	---	---	---	---
	07/30/13		2.2	2.6	7.27	1,210	---	---	---	---
	10/16/13		2.6	3.1	7.50	1,210	---	---	---	---
	01/20/14		2.5	2.8	7.12	1,080	---	---	---	---
	04/14/14		2.6	2.9	8.00	1,500	43.9	13.6	35.0	---
	04/14/14		---	---	---	---	31.7S	---	---	---
	07/18/14		2.3	2.4	18.0	2,700	67.2J	8.33	49.0	---
MW-71S	08/04/09		2.1	2.5	---	---	---	---	---	---
	11/12/09		2.4	2.8	---	---	---	---	---	---
	02/15/10		1.9	2.4	---	---	---	---	---	---
	05/11/10		2.5	3.0	---	---	---	---	---	---
	08/03/10		2.4	3.0	---	---	---	---	---	---
	08/25/10		---	---	20.0J	3,860	---	---	---	---
	10/28/10		2.4	2.4	20.3	3,380	---	---	---	---
	01/25/11		2.4	2.4	23.3	3,250	---	---	---	ND (0.02)
	04/27/11		2.8	2.9	18.0	3,320	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0861
	08/09/11		2.5	3.2	16.7	3,230	---	---	---	---
	11/01/11		4.5	4.7	12.6	2,860	---	---	---	---
	01/17/12		3.5	3.9	14.9	3,040	---	---	---	---
	04/10/12		3.0	3.1	16.5	3,200	---	---	---	---
	07/30/12		4.5	5.1	13.0	2,740	---	---	---	---
	10/17/12		4.8	5.2	12.2	2,530	---	---	---	---
	01/24/13		4.8	5.6	10.5	2,430	---	---	---	---
04/11/13		1.9	2.4	64.5	5,560	---	---	---	---	
07/31/13		1.6	2.7	68.3	5,430	---	---	---	---	
10/16/13		1.4	2.3	75.8	5,300	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-71S	01/20/14		1.6	2.8	69.5	5,410	---	---	---	---
	04/14/14		1.4	1.6	67.0	6,000J	90.1	ND (12.9)	92.0	---
	04/14/14		---	---	---	---	66.4S	---	---	---
	07/18/14		1.3	1.7	53.0	5,700	79.7J	17.8	97.0	---
MW-83D	08/04/10		1.9	2.5	50.1	4,440	---	---	---	---
	10/28/10		2.0	2.3	43.9	4,570	---	---	---	---
	01/27/11		2.5	2.6	44.6	4,250	---	---	---	ND (0.02)
	05/04/11		2.0	2.8	43.5J	4,360	---	---	---	---
	05/11/11		---	---	---	---	---	---	---	ND (0.02)
	06/02/11		---	---	45.2	---	---	---	---	---
	07/28/11		1.4	2.2	46.3J	4,160	---	---	---	---
	11/02/11		2.6	2.0	57.8	4,250	---	---	---	---
	01/17/12		ND (1.0)	1.4	63.8	4,000	---	---	---	---
	04/10/12		0.71	2.6	69.6	3,380	---	---	---	---
	06/04/12		0.83	1.0	---	---	---	---	---	---
	07/24/12		0.64	2.4	68.3	3,920	---	---	---	---
	07/24/12	FD	0.66	2.3	69.9	3,780	---	---	---	---
	10/18/12		0.73	ND (1.0)	72.0	3,740	---	---	---	---
	01/24/13		0.67	1.4	64.0	3,630	---	---	---	---
	04/11/13		0.76	1.2	63.3	3,760	---	---	---	---
	07/31/13		0.84	1.1	69.2	3,710	---	---	---	---
	10/17/13		0.65	1.2	67.4	3,180	---	---	---	---
	01/22/14		0.72	1.9	67.8	3,780	---	---	---	---
	04/15/14		0.88	1.4	55.0	3,500J	111	19.4	95.0	---
04/15/14		---	---	---	---	77.4S	---	---	---	
07/21/14		0.74	1.4	53.0	3,500	107	ND (5.54)	93.0	---	
MW-83S	06/22/10		0.55	1.8	22.7	3,700	---	---	---	---
	08/04/10		0.56	1.1	34.2	4,000	---	---	---	---
	10/28/10		1.8	2.4	36.1	4,220	---	---	---	---
	01/27/11		2.4	2.4	44.7	4,000	---	---	---	ND (0.02)
	05/04/11		1.8	3.3	38.3	4,210	---	---	---	---

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-83S	05/11/11		---	---	---	---	---	---	---	ND (0.02)
	06/02/11		2.7	2.7	---	---	---	---	---	---
	07/28/11		1.2	1.9	35.6J	3,540	---	---	---	---
	11/02/11		ND (1.0)	1.9	42.0	3,700	---	---	---	---
	11/02/11	FD	1.1	1.7	44.6	3,760	---	---	---	---
	01/17/12		1.4	1.9	63.2	3,800	---	---	---	---
	04/10/12		1.2	3.3	66.5	3,320	---	---	---	---
	06/04/12		1.7	2.8	---	---	---	---	---	---
	07/24/12		1.3	2.8	66.0	3,760	---	---	---	---
	10/18/12		1.2	1.9	54.7	3,570	---	---	---	---
	01/24/13		1.4	2.7	61.6	3,560	---	---	---	---
	04/11/13		1.4	2.4	55.6	3,430	---	---	---	---
	07/31/13		1.0	2.3	62.8	3,570	---	---	---	---
	10/01/13		1.0	2.1	53.0	3,600	---	---	---	---
	01/22/14		1.0	2.5	61.1	3,460	---	---	---	---
	04/15/14		1.5	2.5	46.0	3,600	119	9.98	86.0	---
	04/15/14		---	---	---	---	67.4S	---	---	---
07/21/14		1.4	2.2	40.0	3,400	75.6	21.1	74.0	---	
MW-89D	06/21/10		ND (0.78)	1.0	16.8	2,520	---	---	---	---
	08/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	19.0J	2,840	---	---	---	---
	10/28/10		0.74	1.2	24.4	2,740	---	---	---	---
	01/27/11		0.99	ND (1.0)	22.8	2,570	---	---	---	ND (0.02)
	05/05/11		0.94	1.6	21.1	2,640	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0202
	07/28/11		0.49	ND (1.0)	15.9	1,920	---	---	---	---
	11/11/11		0.66	1.2	24.7	2,520	---	---	---	---
	01/18/12		0.63	ND (1.0)	24.2	2,650	---	---	---	---
	04/10/12		0.43	ND (1.0)	17.1	1,850	---	---	---	---
	07/10/12		0.61	ND (1.0)	18.0	2,500	---	---	---	---
10/12/12		0.66	ND (1.0)	18.1	2,310	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-89D	01/31/13		0.74	ND (1.0)	17.3	2,230	---	---	---	---
	04/11/13		0.78	ND (1.0)	15.7	2,050	---	---	---	---
	08/01/13		0.7	ND (1.0)	13.2	1,710	---	---	---	---
	10/17/13		0.69	ND (1.0)	12.2	1,680	---	---	---	---
	01/24/14		0.66	ND (1.0)	11.6	1,620	---	---	---	---
	04/15/14		ND (0.77)	ND (1.0)	8.00	1,500J	25.4	5.89	18.0	---
	04/15/14		---	---	---	---	16.4S	---	---	---
	07/24/14		0.57	ND (1.0)	6.20	1,400	16.6	ND (4.00)	13.0	---
MW-89S	06/21/10		2.4	2.1	56.8	4,370	---	---	---	---
	08/02/10		3.0	3.1	---	---	---	---	---	---
	08/25/10		---	---	41.0J	4,420	---	---	---	---
	10/28/10		2.6	3.0	49.5J	4,100	---	---	---	---
	01/27/11		3.7	3.8	37.2	4,130	---	---	---	0.0258
	05/05/11		4.4	4.6	39.5	3,820	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0215
	07/28/11		3.5	4.3	48.3	3,740	---	---	---	---
	07/28/11	FD	3.7	4.4	44.7	4,010	---	---	---	---
	11/11/11		3.8	3.8	44.3	3,800	---	---	---	---
	01/18/12		3.8	4.8	40.9	3,860	---	---	---	---
	04/10/12		3.5	4.9	43.3	3,440	---	---	---	---
	07/10/12		4.7	4.8	38.8	3,750	---	---	---	---
	10/12/12		4.0	4.1	38.0	3,800	---	---	---	---
	01/31/13		4.0	4.4	41.9	4,090	---	---	---	---
	04/11/13		3.4	4.1	51.8	3,970	---	---	---	---
	08/01/13		3.2	3.6	53.7	4,180	---	---	---	---
	10/17/13		3.0	3.3	52.5	4,040	---	---	---	---
	01/24/14		2.7	3.3	68.7	4,060	---	---	---	---
	04/15/14		---	---	---	---	32.0S	---	---	---
	04/15/14		3.1	3.3	48.0	4,200	124	9.57	58.0	---
07/24/14		2.5	4.0	48.0	4,100	74.8	ND (12.9)	82.0	---	
09/04/14		3.0	3.1	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Gorman (OU2)										
MW-105D	07/11/11		ND (0.2)	ND (1.0)	ND (1.00)	270	---	---	---	---
	10/25/11		0.31	ND (1.0)	---	---	---	---	---	---
	02/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	02/02/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/23/12		ND (0.064)	ND (1.0)	ND (0.05)	410	---	---	---	---
	07/19/12		0.067	ND (1.0)	---	---	---	---	---	---
	10/04/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	10/04/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/30/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/17/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/17/13	FD	ND (0.06)	ND (1.0)	---	---	---	---	---	---
	07/10/13		ND (0.095)	ND (1.0)	---	---	---	---	---	---
	10/10/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/14/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/16/14		ND (0.085)	ND (1.0)	ND (0.05)	320	5.83	ND (4.00)	4.20	---
	07/22/14		ND (0.06)	ND (1.0)	ND (0.05)	330	4.73	ND (4.00)	4.30	---
MW-105S	07/11/11		2.2	2.2	8.26	622	---	---	---	---
	08/12/11		2.4	2.1	8.33	616	---	---	---	---
	08/12/11	FD	2.5	2.3	8.58	616	---	---	---	---
	09/14/11		2.6	2.5	---	---	---	---	---	---
	10/25/11		2.4	3.0	---	---	---	---	---	---
	11/14/11		2.2	3.0	---	---	---	---	---	---
	02/02/12		2.4	2.6	---	---	---	---	---	---
	04/18/12		2.3	3.0	7.91	548	---	---	---	---
	07/25/12		2.4	2.5	---	---	---	---	---	---
	10/04/12		2.5	2.6	---	---	---	---	---	---
	01/25/13		2.5	2.9	---	---	---	---	---	---
	04/17/13		2.4	2.5	---	---	---	---	---	---
	07/16/13		1.8	2.4	---	---	---	---	---	---
	10/10/13		2.4	2.5	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-105S	01/14/14		2.1	2.8	---	---	---	---	---	---
	04/16/14		2.7	2.8	5.20	710	26.4	5.92J	21.0	---
	07/22/14		2.8	3.2	4.80	740	23.3	4.42	21.0	---
	09/04/14		2.4	2.4	---	---	---	---	---	---
MW-206S	06/04/14		1.6	1.3	3.20	5,800	ND (17.2)	9.91	20.0	---
	07/10/14		1.4	1.3	4.60	6,600	ND (33.1)	ND (26.9)	24.0	---
MW-70D	08/04/09		2.0	2.1	---	---	---	---	---	---
	11/12/09		3.4	3.8	---	---	---	---	---	---
	02/15/10		2.5	2.7	---	---	---	---	---	---
	02/15/10	FD	2.6	3.4	---	---	---	---	---	---
	05/11/10		2.6	2.8	---	---	---	---	---	---
	08/03/10		1.3	1.1	---	---	---	---	---	---
	08/26/10		---	---	1.80	934	---	---	---	---
	10/28/10		4.6	4.8	7.29	1,400	---	---	---	---
	01/25/11		4.6	4.6	9.35	1,600	---	---	---	0.0336
	05/02/11		3.8	4.3	6.15	1,340	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0739
	08/09/11		1.6	1.9	7.59	1,420	---	---	---	---
	11/01/11		1.9	2.1	8.77	1,680	---	---	---	---
	01/13/12		0.57	ND (1.0)	1.48	770	---	---	---	---
	04/10/12		2.2	3.0	10.1J	1,980	---	---	---	---
	07/23/12		2.0	2.3	11.8	2,320	---	---	---	---
	07/23/12	FD	2.0	2.2	12.0	2,340	---	---	---	---
	10/17/12		1.4	1.8	5.25	1,600	---	---	---	---
	01/24/13		1.4	2.0	5.64	1,020	---	---	---	---
	01/24/13	FD	1.5	2.0	6.17	1,110	---	---	---	---
04/11/13		1.4	1.5	2.12	802	---	---	---	---	
07/30/13		1.5	1.8	17.0	1,920	---	---	---	---	
10/16/13		1.2	1.8	20.6	2,130	---	---	---	---	
01/20/14		1.4	2.0	28.6	2,920	---	---	---	---	
04/11/14		1.5	1.6	20.0	2,300	76.5	7.80	54.0	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-70D	04/11/14		---	---	---	---	49.7S	---	---	---
	07/24/14		1.7	2.2	24.0	2,800	61.8	20.4	66.0	---
MW-70S	08/04/09		1.2	2.2	---	---	---	---	---	---
	11/12/09		1.2	2.4	---	---	---	---	---	---
	02/15/10		1.7	2.1	---	---	---	---	---	---
	05/11/10		1.8	2.6	---	---	---	---	---	---
	08/03/10		2.4	2.0	---	---	---	---	---	---
	08/26/10		---	---	63.0	5,040	---	---	---	---
	10/28/10		1.6	3.0	77.9J	4,840	---	---	---	---
	01/25/11		1.8	1.9	67.2	4,100	---	---	---	ND (0.02)
	05/02/11		1.6	2.2	68.0	4,560	---	---	---	---
	05/02/11	FD	1.7	2.5	70.8	4,060	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0549
	08/09/11		1.5	2.3	84.5	4,400	---	---	---	---
	11/01/11		1.5	2.0	86.3	4,480	---	---	---	---
	01/13/12		1.2	2.6	84.6J	4,450	---	---	---	---
	04/10/12		1.5	2.4	78.6J	4,040	---	---	---	---
	07/23/12		1.3	1.7	91.0J	4,330	---	---	---	---
	10/17/12		1.2	1.8	88.8	4,480	---	---	---	---
	01/24/13		1.3	1.9	87.1	4,440	---	---	---	---
	04/11/13		1.5	2.0	75.5	4,150	---	---	---	---
	07/30/13		1.4	1.8	67.9	4,380	---	---	---	---
	10/16/13		1.4	2.3	59.3	4,640	---	---	---	---
	01/20/14		0.75	1.4	60.6	4,920	---	---	---	---
	04/11/14		1.7	2.0	53.0	3,200	70.9	17.7	66.0	---
	04/11/14		---	---	---	---	47.0S	---	---	---
	07/24/14		1.6	2.0	57.0	5,200	63.4	ND (19.0)	77.0	---
MW-84D	05/12/10		ND (0.2)	ND (1.0)	ND (1.00)	347	---	---	---	---
	08/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/28/10		ND (0.2)	ND (1.0)	ND (0.50)	304	---	---	---	---
	01/27/11		ND (0.2)	ND (1.0)	ND (0.50)	---	---	---	---	ND (0.02)

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-84D	04/29/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/11/11		---	---	ND (0.50)	324	---	---	---	0.0302
	08/09/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/28/11		ND (0.14)	ND (1.0)	---	---	---	---	---	---
	12/05/11		---	---	2.05	590	---	---	---	---
	12/05/11	FD	---	---	2.04	574	---	---	---	---
	01/24/12		ND (0.06)	ND (1.0)	1.60	---	---	---	---	---
	04/23/12		ND (0.06)	ND (1.0)	1.40	630	---	---	---	---
	07/18/12		0.14	ND (1.0)	2.80	780	---	---	---	---
	07/18/12	FD	0.14	ND (1.0)	2.90	790	---	---	---	---
	10/01/12		0.089	ND (1.0)	3.00	870	---	---	---	---
	01/29/13		0.084	ND (1.0)	3.00	880	---	---	---	---
	01/29/13	FD	0.088	ND (1.0)	2.90	880	---	---	---	---
	04/02/13		0.1	ND (1.0)	3.30	910	---	---	---	---
	07/03/13		0.12	ND (1.0)	2.10	950	---	---	---	---
	10/07/13		0.36	ND (1.0)	3.30	960	---	---	---	---
	01/22/14		0.16	ND (1.0)	4.12	1,100	---	---	---	---
	04/16/14		0.36	ND (1.0)	3.40	1,100	ND (3.00)	ND (4.00)	3.80	---
	04/16/14		---	---	---	---	ND (3.00)S	---	---	---
	07/22/14		0.23	ND (1.0)	3.30	1,100	ND (5.32)	ND (4.00)	4.00	---
MW-84S	05/12/10		1.5	1.9	6.61	2,740	---	---	---	---
	08/02/10		1.8	1.9	---	---	---	---	---	---
	10/28/10		1.9	3.4	9.57	2,550	---	---	---	---
	01/27/11		2.1	1.9	12.2	---	---	---	---	ND (0.02)
	04/29/11		2.0	2.6	---	---	---	---	---	---
	05/11/11		---	---	5.47	2,170	---	---	---	0.0273
	05/11/11	FD	---	---	5.48	2,210	---	---	---	0.0267
	08/09/11		2.1	2.7	---	---	---	---	---	---
	10/28/11		2.3	2.6	---	---	---	---	---	---
	12/05/11		---	---	7.33	1,970	---	---	---	---
	02/03/12		2.3	3.0	7.46	2,170	---	---	---	---

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-84S	04/24/12		2.2	3.8J	6.75	2,530	---	---	---	---
	04/24/12	FD	2.2	3.3J	6.46	2,580	---	---	---	---
	06/04/12		2.1	2.6	---	---	---	---	---	---
	07/31/12		1.8	1.8	7.85	2,580	---	---	---	---
	10/08/12		1.6	2.0	9.95	2,760	---	---	---	---
	01/30/13		1.8	2.2	11.9	2,920J	---	---	---	---
	01/30/13	FD	1.8	2.2	11.9	2,270J	---	---	---	---
	04/10/13		1.8	2.1	13.1	2,580	---	---	---	---
	07/16/13		1.5	2.0	9.75	2,760	---	---	---	---
	10/14/13		1.6	1.8	10.2	2,470	---	---	---	---
	10/14/13	FD	1.6	1.8	10.7	2,560	---	---	---	---
	01/22/14		1.7	1.8	10.4	3,490	---	---	---	---
	04/16/14		---	---	---	---	22.1S	---	---	---
	04/16/14		1.9	2.0	8.40	3,100	32.9	6.42J	29.0	---
07/22/14		1.8	2.2	7.00	3,500	28.6	5.91	27.0	---	
MW-85D	06/21/10		ND (0.49)	ND (1.0)	ND (0.50)	380	---	---	---	---
	08/03/10		0.44	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	ND (0.10)	349	---	---	---	---
	10/26/10		0.29	ND (1.0)	ND (0.50)	320	---	---	---	---
	01/25/11		0.76	ND (1.0)	ND (0.50)	289	---	---	---	0.132
	05/04/11		0.22	ND (1.0)	ND (0.50)	344	---	---	---	---
	05/11/11		---	---	---	---	---	---	---	0.131
	07/28/11		ND (0.2)	ND (1.0)	ND (0.50)	303	---	---	---	---
	11/03/11		ND (0.084)	ND (1.0)	1.03	275	---	---	---	---
	01/17/12		ND (0.06)	ND (1.0)	ND (0.50)	303	---	---	---	---
	04/06/12		ND (0.06)	ND (1.0)	0.22	260	---	---	---	---
	07/17/12		ND (0.06)	ND (1.0)	0.24	260	---	---	---	---
	10/10/12		ND (0.06)	ND (1.0)	0.13	320	---	---	---	---
	01/17/13		ND (0.2)	ND (1.0)	0.19	250	---	---	---	---
	04/11/13		0.22	ND (1.0)	ND (0.50)	266	---	---	---	---
07/31/13		ND (0.06)	ND (1.0)	ND (0.50)	3,200	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-85D	09/12/13		---	---	ND (0.50)	261	---	---	---	---
	10/17/13		ND (0.06)	ND (1.0)	ND (0.50)	240	---	---	---	---
	10/17/13	FD	ND (0.06)	ND (1.0)	ND (0.50)	237	---	---	---	---
	01/24/14		ND (0.06)	ND (1.0)	ND (0.50)	247	---	---	---	---
	04/11/14		ND (0.06)	ND (1.0)	0.14	240	3.48	ND (4.00)	2.10	---
	07/24/14		ND (0.06)	ND (1.0)	0.16	260	3.32	ND (4.00)	1.90	---
	07/24/14	FD	ND (0.06)	ND (1.0)	0.20	240	ND (3.00)	ND (4.00)	2.00	---
MW-85S	06/21/10		ND (0.58)	ND (1.0)	5.47	2,100	---	---	---	---
	06/21/10	FD	ND (0.56)	ND (1.0)	5.26	1,980	---	---	---	---
	08/03/10		0.92	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	8.10J	2,400	---	---	---	---
	10/26/10		0.54	1.4	35.5	3,480	---	---	---	---
	01/25/11		1.1	1.3	36.3	2,940	---	---	---	0.0292
	05/04/11		1.3	1.4	5.74	1,880	---	---	---	---
	05/11/11		---	---	---	---	---	---	---	ND (0.02)
	07/28/11		1.6	1.2	8.30J	1,980	---	---	---	---
	11/03/11		1.6	1.7	11.7	2,270	---	---	---	---
	01/17/12		1.3	1.9	12.4	2,120	---	---	---	---
	04/10/12		1.5	2.4	9.70	1,930	---	---	---	---
	07/23/12		1.5	1.8	9.37	1,870	---	---	---	---
	10/18/12		1.5	1.6	8.46	1,960	---	---	---	---
	01/24/13		1.6	2.0	8.01	1,760	---	---	---	---
	04/11/13		1.6	2.1	8.95	1,880	---	---	---	---
	07/31/13		1.6	2.1	9.69	1,930	---	---	---	---
	10/17/13		1.3	2.0	9.88	1,900	---	---	---	---
	01/24/14		1.7	1.7	11.0	1,960	---	---	---	---
	04/11/14		1.8	1.8	9.40	2,200	21.1	ND (5.49)	19.0	---
04/11/14		---	---	---	---	15.7S	---	---	---	
07/24/14		1.7	2.0	8.80	2,700	17.2	5.98	19.0	---	
MW-86D	06/21/10		ND (0.83)	ND (1.0)	ND (0.50)	491	---	---	---	---
	08/02/10		0.3	1.1	---	---	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-86D	08/26/10		---	---	0.47	440	---	---	---	---
	10/26/10		1.2	1.4	5.25J	452	---	---	---	---
	01/25/11		0.77	ND (1.0)	ND (0.50)	418	---	---	---	0.0612
	05/04/11		1.0	4.4	1.79	482	---	---	---	---
	05/04/11	FD	1.1	3.9	ND (0.50)	489	---	---	---	---
	06/01/11		1.2	1.4	---	---	---	---	---	---
	07/28/11		0.77	ND (1.0)	ND (0.50)	537	---	---	---	---
	11/03/11		1.6	1.9	15.5	441	---	---	---	---
	01/17/12		0.89	1.4	ND (0.50)	490	---	---	---	---
	04/10/12		1.5	1.8	0.554	4,160	---	---	---	---
	07/20/12		1.6	2.1	0.614	443	---	---	---	---
	10/18/12		1.5	1.5	0.536	440	---	---	---	---
	01/24/13		1.2	1.6	0.506	432	---	---	---	---
	04/16/13		0.99	1.2	ND (0.50)	436	---	---	---	---
	07/31/13		1.2	1.4	0.541	437	---	---	---	---
	10/17/13		1.3	1.8	0.521	440	---	---	---	---
	01/22/14		1.4	1.5	3.37	458	---	---	---	---
	04/16/14		1.6	1.7	---	450	16.6	ND (4.00)	8.40	---
	07/24/14		1.4	1.9	0.57	450	7.72J	ND (4.00)	8.30	---
	MW-86S	06/22/10		5.5	6.0	14.3	1,490	---	---	---
08/02/10			7.4	7.5	---	---	---	---	---	---
08/26/10			---	---	14.0	1,420	---	---	---	---
10/26/10			5.3	5.7	14.4	1,380	---	---	---	---
01/25/11			5.7	5.0	14.5	1,380	---	---	---	ND (0.02)
05/04/11			5.2	7.4	19.5	1,450	---	---	---	---
06/01/11			5.6	5.6	---	---	---	---	---	---
07/28/11			4.9	5.5	16.2J	1,360	---	---	---	---
11/03/11			5.4	5.8	2.62	1,120	---	---	---	---
01/17/12			4.8	5.0	16.0	1,390	---	---	---	---
04/10/12			5.1	5.9	15.8	1,300	---	---	---	---
04/10/12		FD	5.1	5.3	15.8	1,360	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-86S	07/20/12		4.8	5.3	15.3	1,350	---	---	---	---
	10/18/12		4.5	4.8	16.1	1,390	---	---	---	---
	10/18/12	FD	4.6	4.7	15.1	1,370	---	---	---	---
	01/24/13		4.2	5.2	15.5	1,350	---	---	---	---
	01/24/13	FD	4.2	5.2	16.0	1,370	---	---	---	---
	04/16/13		5.0	5.5	15.2	1,190	---	---	---	---
	07/31/13		4.6	5.4	15.7	1,350	---	---	---	---
	10/17/13		4.3	4.8	16.0	1,320	---	---	---	---
	01/22/14		4.5	5.5	17.2	1,320	---	---	---	---
	04/16/14		---	---	---	---	31.0S	---	---	---
	04/16/14		5.2	5.2	---	1,300	43.8	13.2J	44.0	---
	07/24/14		4.7	5.5	15.0	1,300	45.4	10.6	44.0	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Ranch (OU2) ^a										
MW-14B	05/01/88		20.0	20.0	1.80	734	---	---	---	---
	05/01/88	FD	20.0	20.0	---	---	---	---	---	---
	02/23/94		---	80.0	---	---	---	---	---	---
	06/01/94		---	30.0	---	---	---	---	---	---
	08/09/94		---	30.0	---	---	---	---	---	---
	10/25/94		---	110	---	---	---	---	---	---
	02/09/95		---	90.0	---	---	---	---	---	---
	02/09/95		---	---	16.0	910	---	---	---	---
	04/04/95		---	70.0	---	---	---	---	---	---
	08/15/95		---	30.0	---	---	---	---	---	---
	10/05/95		---	40.0	---	---	---	---	---	---
	02/27/96		---	120	---	---	---	---	---	---
	07/29/96		---	40.0	---	---	---	---	---	---
	10/01/96		---	40.0	---	---	---	---	---	---
	02/04/97		---	91.0	---	---	---	---	---	---
	04/08/97		---	77.0	---	---	---	---	---	---
	07/29/97		---	44.0	---	---	---	---	---	---
	10/06/97		---	42.0	---	---	---	---	---	---
	03/03/98		---	35.0	---	---	---	---	---	---
	05/19/98		---	35.0	---	---	---	---	---	---
	08/11/98		---	43.0	---	---	---	---	---	---
	11/18/98		---	40.0	---	---	---	---	---	---
	02/23/99		---	33.0	---	---	---	---	---	---
	05/26/99		---	34.0	---	---	---	---	---	---
	08/25/99		---	32.0	---	---	---	---	---	---
	11/09/99		---	31.0	---	---	---	---	---	---
	02/09/00		---	34.0	---	---	---	---	---	---
	08/09/00		---	46.0	---	---	---	---	---	---
	11/08/00		---	27.0	---	---	---	---	---	---
	03/09/01		---	17.0J	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-14B	05/23/01		26.2	26.0	---	---	---	---	---	---
	10/03/01		24.0	26.0	---	---	---	---	---	---
	10/03/01		23.0	21.0	---	---	---	---	---	---
	12/11/01		18.0	20.0	---	---	---	---	---	---
	12/11/01		13.0	17.0	---	---	---	---	---	---
	02/12/02		17.7	17.4	---	---	---	---	---	---
	02/12/02	FD	16.9	17.4	---	---	---	---	---	---
	05/17/02		23.0	21.4	---	---	---	---	---	---
	11/14/02		17.1	18.5	---	---	---	---	---	---
	02/18/03		14.4	16.2	12.8	1,130	---	---	---	---
	06/25/03		14.8	18.2	---	---	---	---	---	---
	08/14/03		15.7	18.3	---	---	---	---	---	---
	10/28/03		15.1	18.0	---	---	---	---	---	---
	12/01/03		14.8	27.6J	---	---	---	---	---	---
	02/19/04		15.3	22.8	---	---	---	---	---	---
	08/25/04		15.3	17.7	---	---	---	---	---	---
	02/11/05		15.8	18.5	---	---	---	---	---	---
	08/24/05		35.6	30.5	---	---	---	---	---	---
	02/15/06		15.5	16.6	---	---	---	---	---	---
	08/11/06		42.1	35.9	---	---	---	---	---	---
	02/16/07		12.8	12.7	---	---	---	---	---	---
	08/14/07		39.5	38.8	---	---	---	---	---	---
	02/15/08		35.5	30.0	---	---	---	---	---	---
	08/05/08		36.5	36.1	---	---	---	---	---	---
	05/13/09		---	---	5.34	686	---	---	---	---
	08/11/09		40.2	35.9	4.90J	657	---	---	---	---
	02/11/10		---	---	---	649	---	---	---	---
	08/20/10		42.4	38.6	---	626	---	---	---	---
	01/28/11		---	---	---	826	---	---	---	---
	05/05/11		---	---	5.01	662	---	---	---	0.0234
	07/29/11		46.2	43.9	---	610	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-14B	12/12/11		27.2	25.7	5.64	698	---	---	---	---
	02/01/12		25.1	26.0	3.51	594	---	---	---	---
	04/13/12		37.8	39.4	5.32	594	---	---	---	---
	07/18/12		34.3	33.3	5.12	636	---	---	---	---
	10/15/12		37.3	33.6	5.26	624	---	---	---	---
	10/15/12	FD	37.2	32.1	5.64	608	---	---	---	---
	01/21/13		35.0	33.6	5.25	644	---	---	---	---
	04/16/13		30.2	28.8	4.42	598	---	---	---	---
	07/12/13		19.1	19.2	3.62	605	---	---	---	---
	07/12/13	FD	18.8	18.8	3.05	576	---	---	---	---
	10/17/13		35.8	32.7	5.18	626	---	---	---	---
	01/15/14		31.1	33.6	5.03	603	---	---	---	---
	04/11/14		---	---	---	880	24.1	9.28	24.0	---
	07/18/14		35.0	32.0	5.30	640	28.2J	4.13J	27.0	---
MW-14S	06/06/11		---	---	13.5	1,250	---	---	---	ND (0.02)
	12/12/11		31.4	31.4	13.0	1,290	---	---	---	---
	02/01/12		30.0	31.5	13.5	1,300	---	---	---	---
	04/13/12		31.4	30.9	12.6	1,220	---	---	---	---
	07/27/12		31.0	30.0	11.0	1,300	---	---	---	---
	11/07/12		32.0	30.0	12.0	1,300	---	---	---	---
	02/07/13		30.0	26.0	12.0	1,400	---	---	---	---
	05/01/13		30.0	30.0	12.0	1,300	---	---	---	---
	08/06/13		31.0	29.0	12.0	1,300	---	---	---	---
	11/08/13		30.0	27.0	12.0	1,300	---	---	---	---
	02/05/14		29.0	28.0	12.0	1,300	---	---	---	---
	05/07/14		30.0	27.0	12.0	1,300	55.3	6.54	42.0	---
	08/06/14		29.0	29.0	12.0	1,200	46.7	4.03	40.0	---
	MW-22A1	12/20/02		2.0	8.3	---	---	---	---	---
02/25/03			1.9	5.8	---	---	---	---	---	---
05/05/11			---	---	31.2	2,480	---	---	---	ND (0.02)
05/05/11		FD	---	---	31.4	2,400	---	---	---	ND (0.02)

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-22B	12/20/02		14.2	22.4	---	---	---	---	---	---
	02/26/03		17.8J	20.9	---	---	---	---	---	---
	02/26/03	FD	18.3	21.6	---	---	---	---	---	---
	04/17/03		15.6	21.6	---	---	---	---	---	---
	04/17/03	FD	15.2	19.3	---	---	---	---	---	---
	06/24/03		14.6	18.6	---	---	---	---	---	---
	08/13/03		13.4	14.8	---	---	---	---	---	---
	10/29/03		13.5	20.8	---	---	---	---	---	---
	12/01/03		12.2	22.9J	---	---	---	---	---	---
	02/16/04		11.7	15.9	---	---	---	---	---	---
	04/29/04		11.2	12.2	---	---	---	---	---	---
	06/14/04		13.0	14.2	---	---	---	---	---	---
	08/24/04		10.7	13.3	---	---	---	---	---	---
	10/14/04		10.7	11.4	---	---	---	---	---	---
	12/07/04		9.9	12.8	---	---	---	---	---	---
	02/07/05		13.0	14.6	---	---	---	---	---	---
	05/04/05		10.4	10.9	---	---	---	---	---	---
	05/04/05	FD	10.5	10.5	---	---	---	---	---	---
	06/06/05		10.0	11.7	---	---	---	---	---	---
	06/06/05	FD	10.0	11.7	---	---	---	---	---	---
	08/18/05		17.7	17.7	---	---	---	---	---	---
	10/12/05		20.3	22.7	---	---	---	---	---	---
	10/12/05	FD	20.4	27.6	---	---	---	---	---	---
	12/06/05		20.4	21.8	---	---	---	---	---	---
	12/06/05	FD	19.7	20.9	---	---	---	---	---	---
	02/15/06		16.4	21.6	---	---	---	---	---	---
	08/09/06		13.4	11.8	---	---	---	---	---	---
	08/09/06	FD	13.5	11.3	---	---	---	---	---	---
	10/17/06		14.4	14.1	13.9	1,220	---	---	---	---
	10/17/06	FD	14.6	12.8	14.3	1,180	---	---	---	---
	12/05/06		13.0	10.8	14.0	1,170	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-22B	02/13/07		12.6	11.9	---	---	---	---	---	---
	02/13/07	FD	12.6	12.3	---	---	---	---	---	---
	08/15/07		11.4	10.3	---	---	---	---	---	---
	02/12/08		10.8	10.2	---	---	---	---	---	---
	08/06/08		10.7	10.6	---	---	---	---	---	---
	08/06/08	FD	10.8	10.4	---	---	---	---	---	---
	05/05/11		---	---	17.8	1,030	---	---	---	ND (0.02)
	12/12/11		21.4	20.2	16.4	1,050	---	---	---	---
	01/27/12		15.2	16.1	16.8	976	---	---	---	---
	04/25/12		16.9	16.8	16.5	1,000	---	---	---	---
	07/26/12		30.1	32.4	14.7	1,040	---	---	---	---
	10/11/12		32.7	30.7	14.2	1,060	---	---	---	---
	01/17/13		34.1	35.3	13.6	1,030	---	---	---	---
	04/08/13		36.8	36.3	13.8	1,040	---	---	---	---
	07/12/13		34.3	35.4	12.9	1,070	---	---	---	---
	10/15/13		33.3	33.3	11.8	1,140	---	---	---	---
	01/14/14		32.3	35.0	10.6	1,050	---	---	---	---
	01/14/14	FD	32.2	38.4	10.6	1,010	---	---	---	---
	04/11/14		---	---	---	1,000	48.7	9.53	38.0	---
	04/11/14		---	---	---	---	30.7S	---	---	---
07/25/14		29.0	29.0	4.30	1,100	44.9	6.38	39.0	---	
MW-27A	06/19/03		4.5	5.8	---	---	---	---	---	---
	08/06/03		23.3	23.5	---	---	---	---	---	---
	08/06/03	FD	23.3	24.1	---	---	---	---	---	---
	10/28/03		23.3	25.0	---	---	---	---	---	---
	12/01/03		23.9	35.4J	---	---	---	---	---	---
	02/20/04		24.5	25.0	---	---	---	---	---	---
	04/27/04		22.5	21.8	---	---	---	---	---	---
	06/15/04		22.9	21.3	---	---	---	---	---	---
	08/26/04		22.3	25.0	---	---	---	---	---	---
	10/12/04		22.6	20.5	---	---	---	---	---	---

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-27A	12/08/04		22.9	24.2	---	---	---	---	---	---
	02/11/05		22.0	25.9	---	---	---	---	---	---
	04/14/05		23.5	22.9	---	---	---	---	---	---
	06/06/05		22.4	23.0	---	---	---	---	---	---
	08/19/05		22.6	22.3	---	---	---	---	---	---
	10/11/05		21.8	28.0	---	---	---	---	---	---
	12/07/05		18.2	19.0	---	---	---	---	---	---
	02/15/06		22.0	23.9	---	---	---	---	---	---
	03/22/06		22.8	24.3	19.5	1,150	---	---	---	---
	08/11/06		22.1	19.4	---	---	---	---	---	---
	02/21/07		20.3	19.6	---	---	---	---	---	---
	08/20/07		20.8	18.7	---	---	---	---	---	---
	02/18/08		20.3	17.2	---	---	---	---	---	---
	02/18/08	FD	20.3	17.2	---	---	---	---	---	---
	08/12/08		18.0	18.8	---	---	---	---	---	---
	11/04/08		16.4	14.6	---	---	---	---	---	---
	02/05/09		18.3	19.7	---	---	---	---	---	---
	08/06/09		17.0	17.7	---	---	---	---	---	---
	02/17/10		16.8	14.8	---	---	---	---	---	---
	08/06/10		17.0	14.8	---	---	---	---	---	---
	01/27/11		16.3	15.7	---	---	---	---	---	---
	04/28/11		---	---	17.2	1,130	---	---	---	ND (0.02)
	04/28/11	FD	---	---	18.8	1,130	---	---	---	ND (0.02)
	07/29/11		15.8	15.8	---	---	---	---	---	---
	07/29/11	FD	16.1	15.4	---	---	---	---	---	---
	01/30/12		13.4	16.0	---	---	---	---	---	---
07/24/12		14.0	13.4	---	---	---	---	---	---	
01/18/13		12.8	12.4	---	---	---	---	---	---	
07/17/13		10.3	11.4	---	---	---	---	---	---	
01/14/14		11.9	12.6	---	---	---	---	---	---	
04/08/14		---	---	---	1,200	47.3	7.63	31.0	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-27A	07/23/14		12.0	11.0	17.0	1,200	36.6	7.10	32.0	---
MW-27B	06/19/03		0.63	3.6	---	---	---	---	---	---
	08/06/03		8.2	10.8	---	---	---	---	---	---
	10/13/03		8.8	7.0	---	---	---	---	---	---
	08/26/04		13.0	17.1	---	---	---	---	---	---
	08/26/04	FD	14.9	15.9	---	---	---	---	---	---
	02/08/05		14.6	20.2	---	---	---	---	---	---
	02/08/05	FD	15.5	19.7	---	---	---	---	---	---
	08/19/05		10.5	11.3	---	---	---	---	---	---
	08/19/05	FD	11.0	11.6	---	---	---	---	---	---
	02/22/06		9.7	12.3	---	---	---	---	---	---
	02/22/06	FD	9.1	12.2	---	---	---	---	---	---
	08/11/06		7.8	6.6	---	---	---	---	---	---
	08/11/06	FD	7.9	7.1	---	---	---	---	---	---
	02/21/07		3.5	3.4	---	---	---	---	---	---
	02/21/07	FD	3.7	3.7	---	---	---	---	---	---
	08/20/07		8.0	7.6	---	---	---	---	---	---
	08/20/07	FD	8.1	8.0	---	---	---	---	---	---
	02/18/08		5.5	4.9	---	---	---	---	---	---
	08/11/08		1.6	1.8	---	---	---	---	---	---
	02/05/09		1.7	ND (2.9)	---	---	---	---	---	---
	05/12/09		---	---	14.2	968	---	---	---	---
	08/11/09		1.8	2.0	12.0J	1,020	---	---	---	---
	02/11/10		3.5	4.3	---	1,040	---	---	---	---
	08/06/10		2.2	2.1	---	1,010	---	---	---	---
	01/28/11		6.0	6.6	---	858	---	---	---	---
	04/28/11		---	---	11.6	936	---	---	---	ND (0.02)
	07/29/11		3.4	3.9	---	914	---	---	---	---
	01/30/12		3.4	3.9	---	932	---	---	---	---
	01/30/12	FD	3.4	3.6	---	918	---	---	---	---
	07/24/12		5.9	6.0	---	918	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-27B	01/18/13		4.2	4.3	---	940	---	---	---	---
	07/17/13		2.1	2.7	---	984	---	---	---	---
	07/17/13	FD	2.1	2.7	---	1,020	---	---	---	---
	01/14/14		4.0	4.4	---	976	---	---	---	---
	04/08/14		---	---	---	930	58.3	8.00	38.0	---
	07/23/14		6.8	6.3	12.0	940	38.9	6.29	39.0	---
MW-56	10/14/04		4.8	5.2	---	---	---	---	---	---
	12/08/04		5.6	6.0	---	---	---	---	---	---
	02/04/05		4.7	5.8	---	---	---	---	---	---
	08/22/05		3.7	3.7	---	---	---	---	---	---
	02/16/06		3.3	5.5	---	---	---	---	---	---
	08/16/06		5.2	4.6	---	---	---	---	---	---
	02/16/07		4.5	4.6	---	---	---	---	---	---
	08/15/07		4.9	4.8	---	---	---	---	---	---
	02/13/08		5.4	7.2	---	---	---	---	---	---
	08/05/08		6.2	6.4	---	---	---	---	---	---
	08/05/08	FD	6.5	6.0	---	---	---	---	---	---
	11/06/08		7.3	6.5	---	---	---	---	---	---
	02/05/09		7.4	7.6	---	---	---	---	---	---
	02/05/09	FD	7.8	7.9	---	---	---	---	---	---
	03/05/09		8.6	7.3	---	---	---	---	---	---
	05/14/09		7.9	7.9	---	---	---	---	---	---
	08/05/09		7.0	6.8	---	---	---	---	---	---
	08/05/09	FD	6.9	7.2	---	---	---	---	---	---
	11/17/09		7.5	7.6	---	---	---	---	---	---
	02/16/10		10	11.0	---	---	---	---	---	---
	05/13/10		8.0	8.3	---	---	---	---	---	---
08/02/10		6.4	6.4	---	---	---	---	---	---	
10/29/10		6.4	6.3	---	---	---	---	---	---	
01/27/11		6.9	6.7	---	---	---	---	---	---	
05/05/11		7.0	8.2	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-56	05/10/11		---	---	12.7	958	---	---	---	ND (0.02)
	08/05/11		6.3	6.8	---	---	---	---	---	---
	11/10/11		6.3	7.2	---	---	---	---	---	---
	11/10/11	FD	6.3	6.8	---	---	---	---	---	---
	02/02/12		5.9	6.1	---	---	---	---	---	---
	04/27/12		6.1	6.3	---	---	---	---	---	---
	07/31/12		4.4	5.0	---	---	---	---	---	---
	10/03/12		4.6	5.0	---	---	---	---	---	---
	01/28/13		5.3	6.1	---	---	---	---	---	---
	04/10/13		5.8	5.9	---	---	---	---	---	---
	07/10/13		5.8	6.0	---	---	---	---	---	---
	10/15/13		4.4	4.5	---	---	---	---	---	---
	10/15/13	FD	4.4	4.2	---	---	---	---	---	---
	01/15/14		4.8	5.4	---	---	---	---	---	---
	04/16/14		5.4	5.6	---	960	43.1	10.1	39.0	---
	04/16/14		---	---	---	---	23.7S	---	---	---
	07/22/14		5.4	5.6	16.0	1,100	47.6	6.29	40.0	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Yang (OU2)										
MW-21A	03/11/04		1.8	4.0	---	---	---	---	---	---
	03/11/04	FD	2.0	3.8	---	---	---	---	---	---
	04/28/04		1.8	3.5	---	---	---	---	---	---
	07/13/04		1.6	2.8	---	---	---	---	---	---
	07/13/04		---	---	15.3	3,680	---	---	---	ND (0.02)
	08/26/04		1.2	4.6	---	---	---	---	---	---
	02/04/05		1.8	3.6	---	---	---	---	---	---
	08/17/05		3.9	3.4	---	---	---	---	---	---
	02/15/06		1.4	4.7	---	---	---	---	---	---
	08/14/06		3.1	3.3	---	---	---	---	---	---
	02/13/07		1.9	2.2	---	---	---	---	---	---
	08/15/07		2.2J	2.3	---	---	---	---	---	---
	02/12/08		1.7	2.8	---	---	---	---	---	---
	08/05/08		3.4	3.1	---	---	---	---	---	---
	10/07/08		---	---	47.5	4,700	---	---	---	---
	05/09/11		---	---	53.7J	4,140	---	---	---	ND (0.02)
	05/09/11	FD	---	---	13.6J	4,080	---	---	---	ND (0.02)
	04/14/14		1.9	1.8	7.50	3,400	89.3JS	8.03J	120	---
	04/14/14		---	---	---	---	89.3JS	---	---	---
	04/14/14	FD	---	---	---	---	66.1JS	---	---	---
	04/14/14	FD	1.9	1.9	7.50	3,400J	66.1JS	32.9J	120	---
	07/17/14		1.9	2.6	8.50	3,400	173J	6.71	100	---
	07/17/14	FD	1.9	2.5	7.70	3,300	131J	ND (5.70)	100	---
MW-21B1	03/11/04		11.5	12.7	---	---	---	---	---	---
	04/28/04		4.6	9.4	---	---	---	---	---	---
	06/14/04		6.2	7.6	---	---	---	---	---	---
	06/14/04	FD	6.2	7.2	---	---	---	---	---	---
	07/14/04		---	---	12.3	1,230	---	---	---	ND (0.02)
	07/14/04		5.8	6.4	---	---	---	---	---	---
	07/14/04	FD	---	---	12.0	1,240	---	---	---	ND (0.02)

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-21B1	07/14/04	FD	5.9	6.1	---	---	---	---	---	---
	08/27/04		5.4	7.0	---	---	---	---	---	---
	10/11/04		5.4	6.3	13.3	1,180	---	---	---	---
	12/07/04		5.2	7.4	---	---	---	---	---	---
	02/03/05		5.2	5.6	12.8J	1,360J	---	---	---	---
	04/12/05		7.0	7.6	11.4	1,370	---	---	---	---
	06/08/05		5.1	7.1	---	---	---	---	---	---
	08/16/05		23.6	23.3	10.5	1,110	---	---	---	---
	10/11/05		37.9	37.0	9.35	963	---	---	---	---
	12/09/05		25.3	29.8	---	---	---	---	---	---
	02/14/06		23.9	23.0	10.5	1,130	---	---	---	---
	04/17/06		13.0	18.0	9.55	1,160	---	---	---	---
	06/12/06		13.7	17.9	---	---	---	---	---	---
	08/14/06		15.0	13.5	13.6	1,340	---	---	---	---
	10/17/06		10	8.2	---	---	---	---	---	---
	12/04/06		9.7	8.3	11.9	1,260	---	---	---	---
	02/13/07		6.2	5.6	11.5	1,190	---	---	---	---
	04/09/07		5.2	6.0	10.9	1,220	---	---	---	---
	06/18/07		5.8	5.4	---	---	---	---	---	---
	06/18/07	5.8	5.9	---	---	---	---	---	---	
	08/15/07	3.9	4.1	12.2	1,300	---	---	---	---	
	10/16/07	5.4	5.0	---	---	---	---	---	---	
	12/06/07	6.1	6.4	12.2	1,110	---	---	---	---	
	02/13/08	3.4	4.3	5.78	1,080	---	---	---	---	
	04/10/08	6.1	5.9	11.5	1,170	---	---	---	---	
	06/10/08	2.7	2.5	8.03	1,380	---	---	---	---	
	08/07/08	3.1	2.9	8.20	1,510	---	---	---	---	
	10/08/08	---	---	10.2	1,200	---	---	---	---	
	11/05/08	5.4	4.9	9.93	1,130	---	---	---	---	
	02/04/09	3.6	3.8	8.05	1,180	---	---	---	---	
05/14/09	2.5	3.3	7.61	1,250	---	---	---	---		

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-21B1	08/10/09		2.7	2.6	6.10	1,310	---	---	---	---
	11/10/09		5.4	5.3	11.4	1,110	---	---	---	---
	02/09/10		4.5	4.9	11.0	1,130	---	---	---	---
	05/12/10		3.0	3.6	7.36	1,160	---	---	---	---
	05/12/10	FD	3.1	3.2	---	---	---	---	---	---
	08/19/10		6.7	5.7	11.4	1,120	---	---	---	---
	08/19/10	FD	6.6	5.7	11.9	1,130	---	---	---	---
	10/27/10		5.1	5.6	4.81	1,110	---	---	---	---
	10/27/10	FD	5.0	5.0	5.20	1,030	---	---	---	---
	01/26/11		4.1	4.0	8.04	1,100	---	---	---	---
	01/26/11	FD	4.1	4.8	8.90	1,070	---	---	---	---
	05/05/11		5.9	6.0	11.9	1,090	---	---	---	---
	07/28/11		5.8	6.4	10.7J	1,430	---	---	---	---
	11/02/11		4.3	4.7	11.0	1,590	---	---	---	---
	01/16/12		8.3	8.3	14.0	1,430	---	---	---	---
	03/09/12		8.8	9.4	---	---	---	---	---	---
	04/09/12		8.9	8.8	14.8	1,130	---	---	---	---
	04/09/12	FD	8.4	8.8	14.9	1,190	---	---	---	---
	07/23/12		5.3	5.6	14.5	1,280	---	---	---	---
	10/17/12		6.0	5.9	21.7	1,490	---	---	---	---
	01/22/13		8.3	7.8	14.2	1,270	---	---	---	---
	04/15/13		8.1	8.5	15.4	1,340	---	---	---	---
	07/30/13		12.2	13.5	22.3	1,770	---	---	---	---
	10/15/13		9.3	9.6	19.2	1,550	---	---	---	---
01/21/14		10.2	10.2	14.8	2,020	---	---	---	---	
04/14/14		---	---	---	---	32.1S	---	---	---	
04/14/14		12.0	12.0	18.0	1,600	46.3	8.74	45.0	---	
07/17/14		7.6	8.5	16.0	1,500	49.7J	5.80	34.0	ND (0.20)	
MW-32B1	07/15/03		3.3	4.1	---	---	---	---	---	---
	08/05/03		3.5	4.8	---	---	---	---	---	---
	10/28/03		3.8	4.1	---	---	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-32B1	12/03/03		3.7	6.3	---	---	---	---	---	---
	02/17/04		3.9J	5.6	---	---	---	---	---	---
	04/26/04		3.9	3.8	---	---	---	---	---	---
	06/16/04		3.8	3.8	---	---	---	---	---	---
	08/24/04		3.9	4.4	---	---	---	---	---	---
	10/13/04		3.8	3.3	1.82	477	---	---	---	---
	12/08/04		3.9	3.8	---	---	---	---	---	---
	02/03/05		4.1	4.5	1.89	498J	---	---	---	---
	04/13/05		3.9	4.4	1.79	550	---	---	---	---
	06/08/05		4.0	4.5	---	---	---	---	---	---
	08/16/05		3.8	4.2	1.91	459	---	---	---	---
	10/12/05		3.9	4.7	1.60	452	---	---	---	---
	12/08/05		3.9	3.6	---	---	---	---	---	---
	02/14/06		4.0	5.0	3.36	550	---	---	---	---
	04/18/06		4.1	5.1	1.77	411	---	---	---	---
	06/14/06		3.8	3.3	---	---	---	---	---	---
	08/15/06		4.2	3.9	2.02	529	---	---	---	---
	10/18/06		4.0	3.9	---	---	---	---	---	---
	12/06/06		4.4	4.3	2.07	394	---	---	---	---
	02/15/07		4.1	3.8	2.19	564	---	---	---	---
	04/10/07		4.0	4.6	3.23	568	---	---	---	---
	06/20/07		4.2	4.2	---	---	---	---	---	---
	08/22/07		4.2	5.3	2.51	457	---	---	---	---
	10/17/07		4.3	3.7	---	---	---	---	---	---
	12/10/07		3.9	4.1	3.12	550	---	---	---	---
	02/13/08		4.1	3.8	2.64	484	---	---	---	---
	02/13/08	FD	4.1	3.8	2.51	461	---	---	---	---
	04/09/08		4.1	4.0	4.08	570	---	---	---	---
	06/09/08		4.0	3.9	2.82	494	---	---	---	---
	08/07/08		3.9	3.4	2.34	457	---	---	---	---
	10/10/08		---	---	4.07	590	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-32B1	11/06/08		3.9	2.9	4.13	601	---	---	---	---
	02/05/09		3.9	3.8	2.61	497	---	---	---	---
	05/14/09		3.7	3.6	2.83	538	---	---	---	---
	08/10/09		3.8	4.0	ND (5.00)	539	---	---	---	---
	11/10/09		3.7	3.6	3.98	597	---	---	---	---
	02/10/10		3.6	3.3	2.77	537	---	---	---	---
	05/12/10		4.0	3.7	2.91	515	---	---	---	---
	08/19/10		3.9	3.4	3.42	526	---	---	---	---
	10/27/10		3.5	3.6	3.23	514	---	---	---	---
	01/26/11		4.3	4.0	3.46	538	---	---	---	ND (0.02)
	05/02/11		3.7	3.6	4.23	612	---	---	---	---
	08/01/11		3.8	3.4	18.1	622	---	---	---	---
	11/01/11		3.8	3.8	4.05	630	---	---	---	---
	01/16/12		3.5	3.6	3.08	718	---	---	---	---
	04/09/12		4.8	4.6	6.92	778	---	---	---	---
	07/24/12		4.0	4.0	6.22	884	---	---	---	---
	10/17/12		4.0	4.0	6.80	970	---	---	---	---
	01/24/13		3.9	4.2	7.10	974	---	---	---	---
	04/15/13		17.1	17.4	11.8	1,040	---	---	---	---
	08/01/13		4.1	4.2	8.84	1,090	---	---	---	---
10/15/13		4.7	4.3	9.86	1,200	---	---	---	---	
01/21/14		4.3	4.3	9.87	1,150	---	---	---	---	
04/16/14		17.0	17.0	11.0	1,000	44.8	7.90	35.0	---	
04/16/14		---	---	---	---	26.9S	---	---	---	
07/23/14		5.1	4.7	9.40	1,300	37.2	5.51	33.0	---	
MW-32S	10/27/10		2.1	2.5	17.8	1,950	---	---	---	---
	01/13/11		2.3	2.9	---	---	---	---	---	---
	05/02/11		1.6	2.6	---	---	---	---	---	---
	05/10/11		---	---	19.6	1,910	---	---	---	0.0482
	08/01/11		2.3	3.7	---	---	---	---	---	---
11/01/11		3.7	3.5	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-32S	12/12/11		---	---	22.6	2,030	---	---	---	---
	02/01/12		3.2	3.6	26.4	2,090	---	---	---	---
	04/25/12		3.2	4.2	24.3	2,120	---	---	---	---
	04/25/12	FD	3.2	4.0	23.2	2,110	---	---	---	---
	07/24/12		3.1	4.0	23.1	2,120	---	---	---	---
	10/10/12		3.4	4.6	23.4	2,150	---	---	---	---
	10/10/12	FD	3.4	4.9	23.4	2,160	---	---	---	---
	01/17/13		3.2	3.8	24.2	2,140	---	---	---	---
	04/09/13		4.9	5.2	6.59	1,810	---	---	---	---
	07/15/13		3.2	4.4	18.9	2,170	---	---	---	---
	10/15/13		3.0	3.2	20.0	2,260	37.0	ND (22.0)	43.0	---
	01/15/14		3.0	4.0	21.0	2,360	---	---	---	---
	04/16/14		3.5	3.4	18.0	2,600	76.8	17.8	59.0	---
	04/16/14		---	---	---	---	46.9S	---	---	---
	07/23/14		3.4	3.8	19.0	2,400	61.2	6.87	60.0	---
07/23/14	FD	3.4	3.7	19.0	2,400	59.1	7.56	56.0	---	
MW-49A	04/09/04		4.3	5.1	---	---	---	---	---	---
	04/27/04		4.2	5.2	---	---	---	---	---	---
	09/01/04		3.9	12.2	---	---	---	---	---	---
	02/08/05		3.9	9.6	---	---	---	---	---	---
	06/08/05		3.7	7.3	---	---	---	---	---	---
	08/19/05		3.4	4.4	---	---	---	---	---	---
	10/12/05		3.3	6.7	---	---	---	---	---	---
	12/07/05		3.6	3.8	---	---	---	---	---	---
	02/15/06		3.7	7.3	---	---	---	---	---	---
	04/20/06		3.8	7.4	---	---	---	---	---	---
	06/14/06		3.4	3.1	---	---	---	---	---	---
	08/11/06		3.8	3.2	---	---	---	---	---	---
10/19/06		3.4	3.0	---	---	---	---	---	---	
12/07/06		3.9	4.0	---	---	---	---	---	---	
02/16/07		3.9	4.0	---	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-49A	04/10/07		3.7	4.1	---	---	---	---	---	---
	06/19/07		4.2	4.3	---	---	---	---	---	---
	07/25/07		4.2	5.3	---	---	---	---	---	---
	08/16/07		4.2	2.7	---	---	---	---	---	---
	10/17/07		4.4	4.2	---	---	---	---	---	---
	12/06/07		4.4	4.7	---	---	---	---	---	---
	02/14/08		4.5	4.5	---	---	---	---	---	---
	04/08/08		4.3	4.8	---	---	---	---	---	---
	06/12/08		4.6	5.7	14.7	1,210	---	---	---	---
	08/12/08		4.1	4.6	---	---	---	---	---	---
	11/07/08		3.5	4.9	---	---	---	---	---	---
	02/05/09		4.5	ND (4.7)	---	---	---	---	---	---
	05/13/09		4.5	4.6	14.4	1,160	---	---	---	---
	08/11/09		4.4	4.7	12.0J	1,230	---	---	---	---
	11/17/09		4.1	4.1	---	---	---	---	---	---
	02/10/10		4.1	4.0	---	1,180	---	---	---	---
	05/11/10		4.5	4.4	---	---	---	---	---	---
	08/03/10		4.6	4.2	---	1,010	---	---	---	---
	10/12/10		4.5	8.9	---	---	---	---	---	---
	10/27/10		4.9	4.2	---	---	---	---	---	---
	12/13/10		4.2	4.7	---	---	---	---	---	---
	01/26/11		4.2	4.2	---	1,060	---	---	---	---
	04/28/11		4.2	4.3	13.3	1,120	---	---	---	ND (0.02)
	08/05/11		4.3	4.3	---	1,150	---	---	---	---
	11/09/11		4.0	3.7	---	---	---	---	---	---
	01/27/12		4.3	4.8	---	1,130	---	---	---	---
	04/17/12		4.3	4.9	---	---	---	---	---	---
	07/30/12		3.9	4.1	---	1,070	---	---	---	---
	10/03/12		4.2	4.8	14.8	---	---	---	---	---
	02/01/13		4.1	4.8	---	1,120	---	---	---	---
	04/02/13		3.8	4.4	15.4	1,100	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-49A	07/10/13		3.7	3.9	---	1,120	---	---	---	---
	10/09/13		3.6	3.3	---	---	---	---	---	---
	10/09/13	FD	3.6	3.6	---	---	---	---	---	---
	01/14/14		3.7	3.8	---	1,080	---	---	---	---
	04/16/14		3.7	4.0	---	960	47.6	5.68	35.0	---
	04/16/14		---	---	---	---	20.3S	---	---	---
	07/22/14		3.8	3.9	14.0	1,100	45.0	4.20	36.0	---
MW-49B	04/09/04		2.0	3.0	---	---	---	---	---	---
	04/27/04		1.8	3.2	---	---	---	---	---	---
	09/01/04		2.1	8.6	---	---	---	---	---	---
	02/08/05		2.2	7.7J	---	---	---	---	---	---
	02/08/05	FD	2.2	10.1J	---	---	---	---	---	---
	06/08/05		2.4	4.9	---	---	---	---	---	---
	08/19/05		2.2	3.6	---	---	---	---	---	---
	08/19/05	FD	2.2	3.4	---	---	---	---	---	---
	10/14/05		2.0	3.2	---	---	---	---	---	---
	12/07/05		2.2	2.4	---	---	---	---	---	---
	02/15/06		2.5	6.3	---	---	---	---	---	---
	02/15/06	FD	2.6	6.4	---	---	---	---	---	---
	04/19/06		2.5	5.3J	---	---	---	---	---	---
	04/19/06	FD	2.5	7.1J	---	---	---	---	---	---
	06/14/06		2.2	1.9	---	---	---	---	---	---
	06/14/06	FD	2.2	2.6	---	---	---	---	---	---
	08/11/06		2.7	2.4	---	---	---	---	---	---
	10/19/06		2.7	2.3	---	---	---	---	---	---
	10/19/06	FD	2.7	2.7	---	---	---	---	---	---
	12/07/06		2.9	2.9	---	---	---	---	---	---
12/07/06	FD	2.9	3.0	---	---	---	---	---	---	
02/16/07		2.7	2.8	---	---	---	---	---	---	
04/10/07		2.5	2.8	---	---	---	---	---	---	
04/10/07	FD	2.5	2.8	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-49B	06/19/07		2.7	4.3	---	---	---	---	---	---
	08/16/07		2.5	2.5	---	---	---	---	---	---
	10/17/07		2.3	2.0	---	---	---	---	---	---
	12/06/07		2.4	2.7	---	---	---	---	---	---
	02/14/08		2.5	2.8	---	---	---	---	---	---
	04/08/08		2.4	2.7	---	---	---	---	---	---
	06/12/08		2.4	2.5	16.0	1,160	---	---	---	---
	08/12/08		2.0	1.7	---	---	---	---	---	---
	05/12/09		---	---	13.8	1,020	---	---	---	---
	08/11/09		2.1	2.2	13.0J	1,120	---	---	---	---
	02/10/10		1.7	1.7	---	1,090	---	---	---	---
	08/03/10		2.1	1.8	---	998	---	---	---	---
	01/27/11		---	---	---	1,020	---	---	---	---
	04/28/11		---	---	14.6	1,060	---	---	---	ND (0.02)
	08/05/11		2.1	2.1	---	1,100	---	---	---	---
	01/27/12		2.0	2.4	---	1,070	---	---	---	---
	07/30/12		2.0	2.5	---	1,070	---	---	---	---
	02/01/13		---	---	---	1,090	---	---	---	---
	07/10/13		2.0	2.1	---	1,030	---	---	---	---
	01/14/14		---	---	---	1,100	---	---	---	---
04/16/14		---	---	---	1,100	45.3	9.62	39.0	---	
04/16/14		---	---	---	---	22.6S	---	---	---	
07/22/14		2.0	2.0	16.0	1,100	48.5	4.66	38.0	---	
MW-88D	06/21/10		ND (0.23)	ND (1.0)	2.50	844	---	---	---	---
	08/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/24/10		---	---	3.00J	788	---	---	---	---
	10/26/10		ND (0.2)	ND (1.0)	2.32	658	---	---	---	---
	10/26/10	FD	ND (0.2)	ND (1.0)	2.17	644	---	---	---	---
	01/25/11		ND (0.2)	ND (1.0)	2.40	610	---	---	---	0.0606
	01/25/11	FD	ND (0.2)	ND (1.0)	2.31	610	---	---	---	0.0558
05/05/11		ND (0.2)	ND (1.0)	2.91	758	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-88D	07/28/11		ND (0.2)	ND (1.0)	17.2	766	---	---	---	---
	11/03/11		ND (0.13)	ND (1.0)	4.71	820	---	---	---	---
	01/17/12		0.078	ND (1.0)	5.34	868	---	---	---	---
	04/05/12		0.065	ND (1.0)	5.40	900	---	---	---	---
	07/17/12		0.16	ND (1.0)	5.60	890	---	---	---	---
	10/10/12		ND (0.06)	ND (1.0)	3.80	810	---	---	---	---
	10/10/12	FD	ND (0.06)	ND (1.0)	4.00	840	---	---	---	---
	01/30/13		ND (0.06)	ND (1.0)	4.30	820	---	---	---	---
	01/30/13	FD	ND (0.06)	ND (1.0)	4.30	810	---	---	---	---
	04/09/13		0.069	ND (1.0)	5.20	800	---	---	---	---
	04/09/13	FD	0.062	ND (1.0)	5.20	790	---	---	---	---
	07/12/13		ND (0.06)	ND (1.0)	5.10	640	---	---	---	---
	10/01/13		ND (0.06)	ND (1.0)	5.40	850	---	---	---	---
	03/06/14		ND (0.06)	ND (1.0)	4.80	810	---	---	---	---
	04/15/14		---	---	---	---	18.6S	---	---	---
04/15/14		ND (0.11)	ND (1.0)	---	880	24.6	8.80	17.0	---	
07/21/14		0.2	ND (1.0)	5.70	890	23.7	5.31	20.0	---	
MW-88S	06/21/10		3.7	4.0	14.8	1,300	---	---	---	---
	08/02/10		5.3	4.8	---	---	---	---	---	---
	08/24/10		---	---	15.0J	1,300	---	---	---	---
	10/26/10		5.5	5.2	15.6	1,230	---	---	---	---
	01/25/11		5.6	5.7	16.1	1,100	---	---	---	ND (0.02)
	05/05/11		5.4	5.9	15.9	1,320	---	---	---	---
	07/28/11		5.7	6.2	21.2	1,300	---	---	---	---
	11/03/11		5.8	6.2	18.2	1,240	---	---	---	---
	01/18/12		5.4	6.1	15.4	1,310	---	---	---	---
	04/10/12		5.3	5.9	15.3	1,240	---	---	---	---
	07/24/12		4.4	5.2	15.0	1,250	---	---	---	---
07/24/12	FD	4.4	5.3	15.4	1,240	---	---	---	---	
10/12/12		4.9	5.0	16.2	1,270	---	---	---	---	
01/22/13		5.1	5.1	16.0	1,280	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-88S	04/11/13		5.2	5.7	16.0	1,230	---	---	---	---
	09/12/13		5.3	5.8	15.8	1,240	---	---	---	---
	10/17/13		5.0	5.5	16.0	1,170	---	---	---	---
	01/24/14		5.0	4.5	17.3	1,220	---	---	---	---
	04/15/14		---	---	---	---	30.1S	---	---	---
	04/15/14		5.7	5.6	---	1,300	41.1	8.89	37.0	---
	07/21/14		5.5	6.1	15.0	1,300	47.7	5.74	41.0	---

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Additional Wells Sampled to Develop Baseline Water Quality Conditions										
CA-MW-101	05/02/07		139	86.2	11.5	965	---	---	---	ND (0.50)
	11/26/07		112	116	---	---	---	---	---	---
	11/27/07		---	---	12.4	---	---	---	---	---
	12/27/07		115	108	11.6	---	---	---	---	ND (0.50)
	01/15/08		115	---	11.0	---	---	---	---	---
	01/28/08		120	116	12.1	---	---	---	---	ND (0.50)
	02/07/08		135	---	---	---	---	---	---	---
	02/28/08		122	121	12.3	---	---	---	---	ND (0.50)
	02/28/08	FD	123	128	12.6	---	---	---	---	ND (0.50)
	03/13/08		122	113	12.6	---	---	---	---	ND (0.50)
	04/09/08		125	138	13.4	---	---	---	---	---
	04/09/08	FD	123	---	13.5	---	---	---	---	---
	05/14/08		72.9	72.8	7.99	---	---	---	---	---
	06/04/08		69.4	71.7	7.26	---	---	---	---	ND (0.0)
	06/04/08	FD	68.7	72.2	7.26	---	---	---	---	ND (0.0)
	07/07/08		62.9	65.0	5.65	---	---	---	---	---
	08/04/08		ND (0.2)	4.2	6.69	---	---	---	---	---
	09/02/08		ND (0.2)	5.8	5.15	---	---	---	---	ND (0.50)
	11/03/08		59.4	50.4	6.50	770	---	---	---	ND (0.50)
	11/03/08	FD	58.2	48.9	6.41	775	---	---	---	ND (0.50)
	02/02/09		28.9	26.2J	5.50J	---	---	---	---	ND (0.10)
	02/02/09	FD	29.1	34.2J	5.40J	---	---	---	---	ND (0.10)
	05/07/09		ND (0.2)	ND (1.0)	1.20	---	---	---	---	ND (0.10)
	08/05/09		ND (0.2)	ND (1.0)	1.20	---	---	---	---	ND (0.10)
	11/11/09		ND (0.2)	2.7	5.80	---	---	---	---	ND (0.10)
	01/04/10		ND (0.2)	ND (1.0)	0.49	---	---	---	---	---
	02/17/10		ND (0.2)	ND (0.2)	0.13	---	---	---	---	ND (0.0)
	05/21/10		ND (0.2)	ND (1.0)	0.12	---	---	---	---	ND (0.10)
	08/18/10		ND (0.2)	3.4	0.097	---	---	---	---	---
	10/29/10		ND (0.2)	1.5	0.32	---	---	---	---	---

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-101	02/01/11		ND (0.2)	1.2	0.64	---	---	---	---	---
	05/31/11		ND (0.2)	1.7	2.00	---	---	---	---	---
	07/26/11		ND (1.0)	5.2	1.70	---	---	---	---	---
	10/28/11		4.3	8.2	3.40	---	---	---	---	ND (0.10)
	01/18/12		7.2	8.3	3.80	---	---	---	---	---
	04/30/12		13.0	13.0	3.80	---	---	---	---	---
	08/06/12		22.0	19.0	5.40	---	---	---	---	---
	10/18/12		12.0	17.0	7.10	---	---	---	---	---
	01/08/13		26.0	24.0	7.20	---	---	---	---	---
	04/17/13		28.0	---	6.10	---	---	---	---	---
	07/18/13		ND (0.2)	---	1.50	---	---	---	---	---
	10/07/13		ND (0.2)	---	0.11	---	---	---	---	---
	10/07/13	FD	0.32	---	0.12	---	---	---	---	---
	01/06/14		0.39	---	ND (0.10)	---	---	---	---	---
	04/09/14		ND (0.2)	---	ND (0.10)	650	23.5	5.17J	13.0	---
04/09/14		---	---	---	---	12.1JS	---	---	---	
07/07/14		ND (0.2)	---	ND (0.05)	---	---	---	---	---	
CA-MW-103	05/02/07		61.7	34.7	13.2	1,150	---	---	---	ND (0.50)
	11/26/07		48.7	54.7	---	---	---	---	---	---
	11/27/07		---	---	13.9	---	---	---	---	---
	12/27/07		61.1	58.8	13.9	---	---	---	---	ND (0.50)
	01/15/08		48.7J	---	6.22	---	---	---	---	---
	01/28/08		17.0	26.1	7.01	---	---	---	---	ND (0.50)
	02/07/08		ND (0.2)	---	---	---	---	---	---	---
	02/28/08		ND (0.2)	11.2	1.13	---	---	---	---	ND (0.50)
	03/17/08		ND (0.2)	22.9	3.31	---	---	---	---	ND (0.50)
	04/09/08		ND (0.2)	1.9J	2.99	---	---	---	---	---
	05/14/08		ND (0.2)	4.9	0.789J	---	---	---	---	---
	06/05/08		ND (0.2)	2.4	0.312	---	---	---	---	ND (0.0)
07/07/08		ND (0.2)	3.2	ND (0.20)	---	---	---	---	---	
08/04/08		ND (0.2)	ND (1.0)	ND (0.20)	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-103	09/02/08		ND (0.2)	ND (1.0)	1.25	---	---	---	---	ND (0.50)
	09/02/08	FD	ND (0.2)	ND (1.0)	1.34	---	---	---	---	ND (0.50)
	11/03/08		ND (0.2)	1.9	ND (0.20)	---	---	---	---	ND (0.50)
	02/02/09		ND (0.2)	ND (1.0)	ND (0.10)	---	---	---	---	ND (0.10)
	05/07/09		ND (0.2)	ND (1.0)	ND (0.10)	---	---	---	---	ND (0.10)
	08/06/09		ND (0.2)	ND (1.0)	ND (0.10)	---	---	---	---	ND (0.10)
	11/12/09		ND (0.2)	ND (1.0)	6.30	---	---	---	---	ND (0.10)
	01/04/10		0.33	1.0	6.10	---	---	---	---	---
	02/17/10		0.55	2.3	5.70	---	---	---	---	ND (0.0)
	05/24/10		3.1	4.0	5.80	---	---	---	---	ND (0.10)
	08/18/10		10.1	13.4	5.90	---	---	---	---	---
	10/05/10		14.7	---	6.60	---	---	---	---	---
	10/29/10		13.0	13.4	6.20	---	---	---	---	---
	02/01/11		10.2	11.6	9.40	---	---	---	---	---
	05/31/11		8.7	8.4	1.20	---	---	---	---	---
	07/26/11		5.4	5.8	1.60	---	---	---	---	---
	10/28/11		ND (0.2)	ND (1.0)	0.14	---	---	---	---	ND (0.10)
	01/18/12		0.22	ND (1.0)	0.47	---	---	---	---	---
	04/30/12		ND (0.2)	ND (1.0)	0.36	---	---	---	---	---
	07/23/12		6.8J	6.8J	0.78	---	---	---	---	---
	07/23/12	FD	9.9J	10.0J	0.76	---	---	---	---	---
	10/18/12		98.0	97.0	4.30	---	---	---	---	---
	01/08/13		45.0	44.0	8.90	---	---	---	---	---
	04/17/13		6.6	---	5.50	---	---	---	---	---
	07/18/13		0.4	---	4.00	---	---	---	---	---
	10/07/13		0.2	---	2.90	---	---	---	---	---
	01/06/14		ND (0.2)	---	2.30	---	---	---	---	---
04/09/14		ND (0.2)	---	ND (0.10)	880	5.90JS	ND (4.00)	7.60	---	
04/09/14		---	---	---	---	5.90JS	---	---	---	
07/11/14		0.23	---	ND (0.05)	---	---	---	---	---	
07/11/14	FD	0.28	---	ND (0.05)	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-103D	05/17/12		180	180	6.50	---	---	---	---	---
	05/17/12	FD	180	180	6.60	---	---	---	---	---
	08/09/12		190	180	7.70	---	---	---	---	---
	01/08/13		140	130	3.30	---	---	---	---	---
	05/02/13		42.0	---	6.80	---	---	---	---	---
	07/18/13		6.0	---	3.60	---	---	---	---	---
	10/07/13		0.53	---	0.30	---	---	---	---	---
	10/07/13	FD	0.59	---	0.30	---	---	---	---	---
	01/06/14		0.37	---	ND (0.10)	---	---	---	---	---
	04/09/14		17.0	---	1.10	900	43.5	12.4J	35.0	---
	07/11/14		19.0	---	1.10	---	---	---	---	---
CA-MW-104D	05/03/07		190	185	8.74	705	---	---	---	ND (0.50)
	06/13/07		133J	214	---	---	---	---	---	---
	11/26/07		253	270	---	---	---	---	---	---
	11/27/07		---	---	4.93	---	---	---	---	---
	12/18/07		239	---	---	---	---	---	---	---
	12/27/07		255	---	---	---	---	---	---	---
	01/29/08		296	---	---	---	---	---	---	---
	02/07/08		239	---	---	---	---	---	---	---
	02/28/08		263	271	9.08	---	---	---	---	ND (0.0)
	03/17/08		212	---	---	---	---	---	---	---
	03/17/08	FD	222	253	10.2	---	---	---	---	ND (0.50)
	04/09/08		311	---	---	---	---	---	---	---
	05/21/08		352	---	---	---	---	---	---	---
	06/04/08		31.6	---	---	---	---	---	---	---
	07/08/08		293	---	---	---	---	---	---	---
	08/04/08		299	---	---	---	---	---	---	---
	08/26/09		220	229	10.0J	---	---	---	---	---
02/18/10		282	237	9.30J	---	---	---	---	---	
08/18/10		168	146	11.0	---	---	---	---	---	
02/01/11		238	218	9.50	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
CA-MW-104D	07/26/11		310	330	7.60	---	---	---	---	---
	01/18/12		280	280	7.60	---	---	---	---	---
	08/06/12		91.0	80.0	2.30	---	---	---	---	---
	01/08/13		220	220	6.30	---	---	---	---	---
	01/08/13	FD	220	220	6.50	---	---	---	---	---
	05/02/13		150	---	5.10	---	---	---	---	---
	05/02/13	FD	150	---	5.20	---	---	---	---	---
	07/18/13		170	---	5.40	---	---	---	---	---
	10/08/13		29.0	---	3.20	---	---	---	---	---
	01/06/14		8.1	---	4.30	---	---	---	---	---
	04/09/14		ND (1.7)	---	2.40	870	41.4	8.11J	26.0	---
	07/11/14		ND (0.2)	---	0.058	---	---	---	---	---
	CA-MW-104S	05/03/07		1.4	28.2	11.7	1,090	---	---	---
06/14/07			27.4	47.0	---	---	---	---	---	---
11/26/07			70.0	78.4	---	---	---	---	---	---
11/27/07			---	---	15.1	---	---	---	---	---
12/18/07			54.7	---	---	---	---	---	---	---
12/27/07			35.8	38.9	14.6	---	---	---	---	ND (0.50)
12/27/07		FD	36.7	38.4	14.7	---	---	---	---	ND (0.50)
01/15/08			30.8	---	14.4	---	---	---	---	---
01/28/08			33.5J	32.0	16.8	---	---	---	---	ND (0.50)
02/25/08			28.3	---	---	---	---	---	---	---
03/17/08			27.9	34.8	14.2	---	---	---	---	ND (0.50)
04/09/08			ND (2.9)	4.6J	2.21	---	---	---	---	---
05/14/08			7.5	26.2	16.1	---	---	---	---	---
06/05/08			32.2	33.8	16.5	---	---	---	---	ND (0.0)
07/07/08			19.1	21.7	15.3	---	---	---	---	---
08/04/08			38.6	32.2	16.9	---	---	---	---	---
09/02/08			38.9	35.1	17.2	---	---	---	---	ND (0.50)
11/03/08		47.1	34.4	18.5	---	---	---	---	ND (0.50)	
02/02/09		42.3	39.0J	18.0J	---	---	---	---	ND (0.10)	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
CA-MW-104S	05/07/09		47.1	47.4	14.0	---	---	---	---	ND (0.10)
	08/06/09		28.4	29.9	15.0J	---	---	---	---	ND (0.10)
	11/12/09		30.9	32.7	15.0J	---	---	---	---	ND (0.10)
	01/04/10		36.7	37.4	14.0	---	---	---	---	---
	02/18/10		42.0	35.7	14.0J	---	---	---	---	ND (0.0)
	05/24/10		42.5	41.9	13.0	---	---	---	---	0.14
	06/22/10		35.0	---	12.0	---	---	---	---	---
	08/18/10		38.7	38.2	12.0	---	---	---	---	---
	10/05/10		29.7	---	10.0	---	---	---	---	---
	10/29/10		20.8	28.9J	7.00	---	---	---	---	---
	10/29/10	FD	19.8	22.0J	7.20	---	---	---	---	---
	02/01/11		ND (0.2)	1.5	ND (0.05)	---	---	---	---	---
	02/01/11	FD	ND (0.2)	2.1	ND (0.05)	---	---	---	---	---
	05/31/11		200	190	7.60	---	---	---	---	---
	07/26/11		60.0	71.0	3.20	---	---	---	---	---
	10/28/11		ND (0.2)	4.7	1.00	---	---	---	---	ND (0.10)
	12/08/11		ND (0.2)	2.1	0.13	---	---	---	---	---
	01/18/12		ND (0.2)	1.4	ND (0.05)	---	---	---	---	---
	04/30/12		ND (0.2)	1.0	ND (0.05)	---	---	---	---	---
	08/06/12		ND (0.2)	1.4	0.62	---	---	---	---	---
	10/18/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	02/01/13		1.9	18.0	4.00	---	---	---	---	---
	04/17/13		ND (0.2)	---	2.90	---	---	---	---	---
07/18/13		ND (0.2)	---	1.80	---	---	---	---	---	
10/08/13		12.0	---	7.00	---	---	---	---	---	
01/06/14		19.0	---	7.40	---	---	---	---	---	
04/09/14		12.0	---	5.40	840	33.9	4.59J	24.0J	---	
04/09/14	FD	12.0	---	5.60	840	28.8	5.46J	26.0	---	
07/11/14		ND (0.2)	---	0.90	---	---	---	---	---	
CA-MW-105	05/02/07		95.0	72.5	12.3	1,130	---	---	---	ND (0.50)
	11/26/07		6.9	9.9	---	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-105	11/27/07		---	---	14.0	---	---	---	---	---
	12/27/07		9.9	11.6	13.6	---	---	---	---	ND (0.50)
	01/15/08		10.2	---	14.1	---	---	---	---	---
	01/28/08		11.6	13.3	12.0	---	---	---	---	ND (0.50)
	02/07/08		18.1	---	---	---	---	---	---	---
	02/28/08		15.2	21.0	13.5	---	---	---	---	ND (0.50)
	03/14/08		18.5	17.7	14.4	---	---	---	---	ND (0.50)
	04/09/08		ND (2.0)	2.0J	2.58	---	---	---	---	---
	05/14/08		3.3	4.0	10.4	---	---	---	---	---
	06/05/08		7.3	7.4	14.3	---	---	---	---	ND (0.0)
	07/07/08		ND (0.2)	ND (1.0)	5.68	---	---	---	---	---
	08/04/08		5.7	5.5	13.9	---	---	---	---	---
	09/02/08		14.9	14.5	13.6	---	---	---	---	ND (0.50)
	11/04/08		13.7	11.1	14.5	---	---	---	---	ND (0.50)
	11/04/08	FD	13.8	10.8	14.7	---	---	---	---	ND (0.50)
	02/02/09		12.7	12.0J	14.0J	---	---	---	---	ND (0.10)
	05/07/09		24.0	21.2	12.0	---	---	---	---	ND (0.10)
	08/06/09		17.8	18.9	12.0J	---	---	---	---	ND (0.10)
	11/12/09		37.7	39.0	14.0J	---	---	---	---	ND (0.10)
	01/04/10		15.4	16.0	13.0	---	---	---	---	---
	02/18/10		18.5	15.8	14.0J	---	---	---	---	ND (0.0)
	05/24/10		34.4	33.4	12.0	---	---	---	---	ND (0.10)
	06/22/10		25.0	---	9.20	---	---	---	---	---
	08/18/10		5.6	8.0	2.80	---	---	---	---	---
	10/05/10		1.0	---	0.88	---	---	---	---	---
	10/05/10	FD	1.0	---	0.89	---	---	---	---	---
	10/29/10		8.4	8.7	2.70	---	---	---	---	---
	02/01/11		0.53	ND (1.0)	0.86	---	---	---	---	---
	05/31/11		ND (0.2)	ND (1.0)	0.45	---	---	---	---	---
	07/26/11		0.31	ND (1.0)	0.61	---	---	---	---	---
	10/28/11		0.41	ND (1.0)	0.59	---	---	---	---	ND (0.10)

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-105	01/18/12		9.7	10.0	4.30	---	---	---	---	---
	04/30/12		0.36	1.0	0.20	---	---	---	---	---
	08/06/12		0.55	ND (1.0)	0.21	---	---	---	---	---
	10/18/12		0.27	ND (1.0)	0.45	---	---	---	---	---
	01/09/13		ND (0.2)	ND (1.0)	0.096	---	---	---	---	---
	04/17/13		0.44	---	0.39	---	---	---	---	---
	07/18/13		1.1	---	0.40	---	---	---	---	---
	07/18/13	FD	1.2	---	0.39	---	---	---	---	---
	10/02/13		10.0	---	1.50	---	---	---	---	---
	01/06/14		0.45	---	0.08	---	---	---	---	---
	04/09/14		2.4	---	1.30	750	16.9	ND (4.00)	15.0	---
	07/22/14		24.0	---	4.20	---	---	---	---	---
	CA-MW-105D	05/17/12		410	410	8.40	---	---	---	---
08/06/12			430	400	7.90	---	---	---	---	---
02/01/13			2.0	64.0	1.60	---	---	---	---	---
04/08/13			1.6	---	0.77	---	---	---	---	---
07/18/13			0.62	---	0.92	---	---	---	---	---
10/02/13			2.5	---	0.82	---	---	---	---	---
01/06/14			10.0	---	1.60	---	---	---	---	---
04/09/14			29.0	---	1.50	800	62.9	17.2	52.0	---
07/22/14		29.0	---	1.60	---	---	---	---	---	
CA-MW-106S	05/02/07		7.2	6.8	12.2	1,070	---	---	---	ND (0.50)
	06/14/07		5.4	8.1	---	---	---	---	---	---
	11/26/07		3.4J	4.1	---	---	---	---	---	---
	11/27/07		---	---	13.1	---	---	---	---	---
	12/19/07		2.3	---	---	---	---	---	---	---
	12/27/07		3.2J	3.6	10.5	---	---	---	---	ND (0.50)
	01/15/08		72.6	---	10.7	---	---	---	---	---
	01/28/08		2.1	3.8	11.4	---	---	---	---	ND (0.50)
02/08/08		0.44	---	---	---	---	---	---	---	
02/28/08		3.9	4.2	11.4	---	---	---	---	ND (0.50)	

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Historical Analytical Results for Groundwater Monitoring Wells
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-106S	03/17/08		0.85	1.4	4.52	---	---	---	---	ND (0.50)
	04/09/08		ND (0.2)	ND (1.0)	0.85	---	---	---	---	---
	05/14/08		ND (0.2)	ND (1.0)	4.39	---	---	---	---	---
	06/05/08		ND (0.2)	ND (1.0)	7.76	---	---	---	---	ND (0.0)
	06/05/08	FD	ND (0.2)	ND (0.2)	7.85	---	---	---	---	ND (0.0)
	07/07/08		ND (0.2)	1.2	ND (0.20)	---	---	---	---	---
	07/07/08	FD	ND (0.2)	1.1	ND (0.20)	---	---	---	---	---
	08/04/08		ND (0.2)	ND (1.0)	7.24	---	---	---	---	---
	08/04/08	FD	ND (0.2)	ND (1.0)	7.17	---	---	---	---	---
	09/02/08		ND (0.2)	ND (1.0)	10.8	---	---	---	---	ND (0.50)
	11/04/08		ND (0.2)	ND (1.0)	12.5	---	---	---	---	ND (0.50)
	02/02/09		ND (0.2)	1.5J	ND (0.10)	---	---	---	---	ND (0.10)
	05/07/09		ND (0.2)	ND (1.0)	9.90	---	---	---	---	ND (0.10)
	05/07/09	FD	ND (0.2)	4.3	9.80	---	---	---	---	ND (0.10)
	08/06/09		ND (0.2)	ND (1.0)	9.20J	---	---	---	---	ND (0.10)
	11/12/09		0.53	1.0	12.0J	---	---	---	---	ND (0.10)
	02/18/10		14.5	12.8	12.0J	---	---	---	---	ND (0.0)
	05/24/10		5.3	5.3	12.0	---	---	---	---	ND (0.10)
	08/18/10		9.3	12.5	12.0	---	---	---	---	---
	10/29/10		5.2	5.5	13.0	---	---	---	---	---
	02/01/11		9.2	9.0	13.0	---	---	---	---	---
	05/31/11		13.0	12.0	12.0	---	---	---	---	---
	07/26/11		17.0	17.0	12.0	---	---	---	---	---
	10/28/11		18.0	18.0	12.0	---	---	---	---	ND (0.50)
	01/18/12		6.9	7.0	5.30	---	---	---	---	---
	04/30/12		1.1	1.2	1.20	---	---	---	---	---
	08/09/12		14.0	13.0	3.30	---	---	---	---	---
	10/18/12		0.9	1.0	4.40	---	---	---	---	---
	10/18/12	FD	0.91	1.0	4.50	---	---	---	---	---
	01/09/13		2.6	2.8	3.50	---	---	---	---	---
	04/17/13		12.0	---	7.50	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
CA-MW-106S	07/18/13		0.37	---	7.60	---	---	---	---	---
	10/02/13		ND (0.2)	---	0.088	---	---	---	---	---
	01/06/14		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	04/09/14		---	---	---	---	8.08JS	---	---	---
	04/09/14		ND (0.2)	---	ND (0.05)	740	8.08JS	ND (4.00)	12.0	---
	04/09/14	FD	ND (0.06)	---	ND (0.05)	740	21.5	ND (4.00)	12.0	---
	07/22/14		ND (0.2)	---	ND (0.05)	---	---	---	---	0.29J
CA-MW-107D	11/07/07		99.4	79.2	11.4	---	---	---	---	ND (0.50)
	12/27/07		102	101	10.6	---	---	---	---	ND (0.50)
	01/29/08		131	118	10.9	---	---	---	---	ND (0.50)
	02/28/08		114	116	10.7	---	---	---	---	ND (0.50)
	03/14/08		127	110	11.5	---	---	---	---	ND (0.50)
	04/10/08		105	---	---	---	---	---	---	---
	05/21/08		115	---	---	---	---	---	---	---
	06/04/08		121	131	11.0	---	---	---	---	ND (0.0)
	06/04/08	FD	116	127	10.9	---	---	---	---	ND (0.0)
	07/08/08		129	---	---	---	---	---	---	---
	07/08/08	FD	124	---	---	---	---	---	---	---
	08/05/08		149	---	---	---	---	---	---	---
	09/02/08		125	103	11.0	---	---	---	---	ND (0.50)
	11/04/08		137	113	12.0	---	---	---	---	ND (0.50)
	02/03/09		110	118	13.0J	---	---	---	---	ND (0.10)
	02/03/09	FD	112	116	12.0J	---	---	---	---	ND (0.10)
	05/06/09		123	202	11.0	---	---	---	---	ND (0.10)
	08/06/09		119	122	12.0J	---	---	---	---	ND (0.10)
	11/12/09		110	122	12.0J	---	---	---	---	ND (0.10)
	02/16/10		110	118	12.0J	---	---	---	---	ND (0.0)
05/24/10		124	121	12.0	---	---	---	---	0.19	
08/18/10		150	134	11.0	---	---	---	---	---	
02/01/11		135	135	12.0	---	---	---	---	---	
07/26/11		130	130	12.0	---	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-107D	01/18/12		110	110	12.0	---	---	---	---	---
	04/30/12		110	100	12.0	---	---	---	---	---
	04/30/12	FD	110	100	12.0	---	---	---	---	---
	08/06/12		110	100	11.0	---	---	---	---	---
	01/09/13		89.0	83.0	9.30	---	---	---	---	---
	05/02/13		120	---	8.40	---	---	---	---	---
	07/18/13		120	---	7.20	---	---	---	---	---
	10/02/13		55.0	---	3.00	---	---	---	---	---
	01/06/14		89.0	---	3.20	---	---	---	---	---
	01/06/14	FD	82.0	---	3.30	---	---	---	---	---
	04/09/14		170	---	3.90	810	52.3	7.34J	39.0	---
07/21/14		150	---	4.10	---	---	---	---	ND (0.10)	
CA-MW-107S	11/07/07		24.5	26.1	12.3	---	---	---	---	ND (0.50)
	12/27/07		8.4	20.1	11.7	---	---	---	---	ND (0.50)
	01/29/08		34.2	33.7	12.3	---	---	---	---	ND (0.50)
	02/28/08		29.5	33.4	12.2	---	---	---	---	ND (0.50)
	03/14/08		33.6	32.9	13.1	---	---	---	---	ND (0.50)
	04/10/08		26.8	30.3J	---	---	---	---	---	---
	05/21/08		14.7	---	---	---	---	---	---	---
	06/04/08		30.2	32.3	12.6	---	---	---	---	ND (0.0)
	07/08/08		27.9	---	---	---	---	---	---	---
	08/05/08		31.9	---	---	---	---	---	---	---
	09/02/08		30.0	29.6	12.9	---	---	---	---	ND (0.50)
	11/04/08		27.4	26.5	13.9	---	---	---	---	ND (0.50)
	02/03/09		18.7	20.4	16.0J	---	---	---	---	0.11
	05/06/09		18.0	16.4	14.0	---	---	---	---	ND (0.10)
	08/06/09		13.9	16.4	15.0J	---	---	---	---	ND (0.10)
	11/04/09		13.8	14.3	14.0J	1,120	---	---	---	ND (0.10)
	12/03/09		12.9	11.0	15.0	1,080	---	---	---	---
01/04/10		14.1	14.8	14.0	1,020	---	---	---	---	
02/16/10		11.3	12.3	15.0J	1,020	---	---	---	ND (0.0)	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-107S	03/09/10		11.8	11.1	14.0J	1,080	---	---	---	---
	05/24/10		11.6	11.3	14.0	1,000	---	---	---	0.24
	08/18/10		12.0	17.1	13.0	1,000	---	---	---	---
	10/29/10		11.9	13.0	14.0	1,000	---	---	---	---
	02/01/11		13.8	13.9	13.0	1,100	---	---	---	---
	01/18/12		9.2	11.0	13.0	---	---	---	---	---
	04/30/12		7.1	7.1	11.0	---	---	---	---	---
	08/06/12		6.6	5.9	12.0	---	---	---	---	---
	10/19/12		6.7	6.3	12.0	---	---	---	---	---
	01/09/13		34.0	32.0	9.60	---	---	---	---	---
	04/18/13		15.0	---	5.20	---	---	---	---	---
	07/18/13		3.3	---	2.00	---	---	---	---	---
	10/02/13		0.25	---	ND (0.05)	---	---	---	---	---
	01/06/14		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	04/09/14		---	---	---	---	14.6JS	---	---	---
CA-MW-601	04/09/14		3.8	---	2.20	770	26.3	ND (4.00)	20.0	---
	07/21/14		2.3	---	2.30	---	---	---	---	ND (0.10)
	06/27/12		19.0	18.0	7.50	---	---	---	---	---
	08/01/12		19.0	18.0	7.70	---	---	---	---	---
	11/08/12		16.0	15.0	6.10	---	---	---	---	---
	02/06/13		16.0	17.0	5.80	---	---	---	---	---
	05/08/13		11.0	10.0	5.60	---	---	---	---	---
	08/05/13		12.0	11.0	5.60	---	---	---	---	---
	11/06/13		12.0	11.0	4.60	---	---	---	---	---
	11/06/13	FD	12.0	11.0	4.50	---	---	---	---	---
CA-MW-603	02/04/14		7.5	7.5	4.60	---	---	---	---	---
	05/07/14		7.1	6.9	4.40	1,100	38.0	6.81	31.0	---
	08/04/14		7.2	7.4	3.80	---	---	---	---	---
	06/27/12		8.7	7.8	6.30	---	---	---	---	---
	08/01/12		8.4	8.4	6.30	---	---	---	---	---
	11/08/12		6.9	6.3	5.30	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
CA-MW-603	02/06/13		6.4	6.8	4.40	---	---	---	---	---
	05/08/13		8.4	7.6	6.70	---	---	---	---	---
	05/08/13	FD	8.3	7.8	6.50	---	---	---	---	---
	08/05/13		6.2	6.2	8.00	---	---	---	---	---
	11/06/13		5.0	4.6	11.0	---	---	---	---	---
	02/04/14		4.7	4.7	16.0	---	---	---	---	---
	05/07/14		5.2	4.9	15.0	2,100	52.4	ND (4.20)	39.0	---
	08/04/14		4.0	4.6	16.0	---	---	---	---	---
DW-01	11/13/02		3.3	5.3	12.5	---	---	---	---	---
	11/13/02	FD	3.5	5.2	---	---	---	---	---	---
	01/24/03		3.3	4.8	---	1,870	---	---	---	---
	01/24/03	FD	3.6	7.0	---	1,880	---	---	---	---
	02/20/03		3.4	6.3	11.3	---	---	---	---	---
	04/17/03		3.3	4.9	11.6	1,590	---	---	---	ND (0.02)
	04/17/03	FD	3.5	6.2	11.0	1,600	---	---	---	ND (0.02)
	07/15/03		4.1	5.3	11.8	1,500	---	---	---	ND (0.02)
	07/15/03	FD	3.8	4.6	11.8	1,490	---	---	---	ND (0.02)
	10/27/03		---	---	11.4	1,450	---	---	---	ND (0.02)
	10/27/03	FD	---	---	11.4	1,460	---	---	---	ND (0.02)
	01/26/04		3.9	6.8	---	---	---	---	---	---
	01/26/04		---	---	7.19	1,370	---	---	---	ND (0.02)
	01/26/04	FD	3.9	6.2	---	---	---	---	---	---
	01/26/04	FD	---	---	10.3	1,380	---	---	---	ND (0.02)
	04/28/04		4.0	4.4	---	---	---	---	---	---
	04/28/04		---	---	10.6	1,390J	---	---	---	ND (0.02)
	04/28/04	FD	---	---	10.9	1,420J	---	---	---	ND (0.02)
	04/28/04	FD	4.0	4.7	---	---	---	---	---	---
	07/13/04		---	---	10.4	1,370	---	---	---	ND (0.02)
07/13/04		4.2	4.4	---	---	---	---	---	---	
07/13/04	FD	---	---	10.4	1,380	---	---	---	ND (0.02)	
07/13/04	FD	4.2	4.2	---	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-01	10/13/04		4.2	4.0	10.5	1,350	---	---	---	ND (0.02)
	10/13/04	FD	4.3	4.0	11.4	1,360	---	---	---	ND (0.02)
	01/17/05		6.1	7.1	10.3	1,370	---	---	---	ND (0.02)
	02/04/05		4.6	5.0	---	---	---	---	---	---
	04/15/05		5.7	7.0	13.3	1,800	---	---	---	ND (0.02)
	07/14/05		---	---	23.4	2,680	---	---	---	ND (0.02)
	08/17/05		2.9	3.2	---	---	---	---	---	---
	10/14/05		2.8	5.0	22.8	2,790	---	---	---	ND (0.02)
	12/06/05		2.9	3.7	---	---	---	---	---	---
	02/14/06		5.3	5.5	18.8	2,220	---	---	---	ND (0.02)
	04/19/06		2.4	7.3	18.7	2,960	---	---	---	ND (0.02)
	08/14/06		2.4	2.4	18.1	2,960	---	---	---	ND (0.02)
	08/14/06	FD	2.5	2.5	19.5	2,620	---	---	---	ND (0.02)
	12/07/06		ND (0.2)	3.3	22.6	3,140	---	---	---	0.0265
	02/14/07		3.6	3.4	24.6	2,840	---	---	---	0.0227
	02/14/07	FD	3.6	3.4	24.7	2,760	---	---	---	0.0227
	04/11/07		4.0	5.3	22.7	2,900	---	---	---	ND (0.02)
	06/20/07		4.0	3.9	---	---	---	---	---	---
	08/16/07		4.5	4.6	23.3	2,360	---	---	---	ND (0.02)
	10/15/07		4.4	4.3	---	---	---	---	---	---
	12/11/07		3.4	3.6	32.3	2,820	---	---	---	ND (0.02)
	02/12/08		3.4	3.5	33.0	2,810	---	---	---	ND (0.02)
	02/12/08	FD	3.4	3.4	31.8	2,840	---	---	---	ND (0.02)
	04/11/08		3.7	3.5	23.9	2,880	---	---	---	ND (0.02)
	06/09/08		3.7	3.9	23.6	2,880	---	---	---	---
	08/07/08		3.2	3.6	23.1	2,830	---	---	---	0.023
	10/09/08		---	---	24.9	3,100	---	---	---	---
	11/05/08		3.5	3.0	29.6	2,950	---	---	---	0.0227
	02/04/09		4.2	4.1	26.8	2,610	---	---	---	ND (0.02)
	05/13/09		4.2	4.1	27.9	2,750	---	---	---	ND (0.02)
	08/07/09		3.9	3.7	---	3,240	---	---	---	ND (0.02)

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-01	08/10/09		---	---	24.0	---	---	---	---	---
	11/10/09		3.4	3.6	33.1	3,260	---	---	---	ND (0.02)
	02/09/10		3.8	4.5	33.0	2,540	---	---	---	ND (0.02)
	05/12/10		4.5	4.4	33.9	2,770	---	---	---	---
	08/19/10		4.7	4.8	34.5	3,160	---	---	---	ND (0.02)
	10/28/10		4.3	3.8	32.6	3,030	---	---	---	ND (0.02)
	01/26/11		4.4	4.5	35.2	3,220	---	---	---	ND (0.02)
	05/05/11		4.9	4.6	37.3	3,220	---	---	---	ND (0.02)
	07/29/11		4.4	5.6	38.5	3,170	---	---	---	0.0409
	11/01/11		4.1	4.6	36.1	2,750	---	---	---	ND (0.02)
	01/12/12		3.4	3.9	39.5	3,060	---	---	---	ND (0.02)
	01/12/12	FD	3.4	3.5	38.8	3,100	---	---	---	ND (0.02)
	04/10/12		3.8	4.0	34.2	2,930	---	---	---	0.0327
	07/23/12		3.5	4.0	33.0	3,240	---	---	---	ND (0.02)
	10/17/12		3.6	3.9	30.0	3,330	---	---	---	ND (0.02)
	02/01/13		3.0	3.4	24.6	2,970	---	---	---	ND (0.02)
	04/16/13		3.0	3.3	20.8	2,560	---	---	---	ND (0.02)
	04/16/13	FD	3.0	3.3	20.8	2,960	---	---	---	ND (0.02)
	07/31/13		2.7	4.1	20.0	3,180	---	---	---	ND (0.02)
	10/15/13		2.8	2.9	18.5	3,370	---	---	---	ND (0.02)
01/24/14		2.4	2.4	21.4	3,070	---	---	---	ND (0.02)	
04/14/14		2.3	2.3	---	---	127	21.0	82.0	---	
07/22/14		2.6	3.0	---	---	---	---	---	---	
DW-03	11/13/02		1.5	2.9	38.9	---	---	---	---	---
	11/13/02	FD	---	---	39.0	---	---	---	---	---
	01/24/03		1.7	3.6	---	3,800	---	---	---	---
	02/20/03		1.8	4.4	54.1	---	---	---	---	---
	02/20/03	FD	1.8	4.6	53.6	---	---	---	---	---
	04/17/03		1.9	4.9	58.2	3,830	---	---	---	ND (0.02)
	07/15/03		---	---	56.6	3,880	---	---	---	ND (0.02)
07/15/03		1.8	3.2	---	---	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-03	10/27/03		---	---	62.2	3,870	---	---	---	ND (0.02)
	01/27/04		2.0J	5.0	---	---	---	---	---	---
	01/27/04		---	---	62.3	3,970	---	---	---	ND (0.02)
	04/28/04		1.5J	3.0	---	---	---	---	---	---
	04/28/04		---	---	63.6	3,380J	---	---	---	ND (0.02)
	07/13/04		---	---	62.5	4,200	---	---	---	ND (0.02)
	07/13/04		2.0	2.3	---	---	---	---	---	---
	10/13/04		2.1	2.4	66.8	4,120	---	---	---	ND (0.02)
	01/17/05		2.0	3.4	63.1	3,680	---	---	---	ND (0.02)
	02/04/05		2.0	2.7	---	---	---	---	---	---
	02/04/05	FD	2.0	2.9	---	---	---	---	---	---
	04/15/05		2.0	3.4	62.3	3,510	---	---	---	ND (0.02)
	04/15/05	FD	2.1	3.5	62.2	3,500	---	---	---	ND (0.02)
	07/14/05		---	---	59.3	4,380	---	---	---	ND (0.02)
	08/17/05		1.9	2.4	---	---	---	---	---	---
	08/17/05	FD	2.0	1.9	---	---	---	---	---	---
	10/14/05		1.9	4.1	64.7	4,000	---	---	---	ND (0.02)
	10/14/05	FD	1.9	2.9	74.2	3,980	---	---	---	ND (0.02)
	12/06/05		1.4J	2.2	---	---	---	---	---	---
	02/14/06		2.0	2.4	74.8	4,720	---	---	---	ND (0.02)
	02/14/06	FD	2.1	2.3	74.4	4,270	---	---	---	ND (0.02)
	04/19/06		1.8	6.7	66.8	4,370	---	---	---	ND (0.02)
	06/13/06		1.9	1.7	---	---	---	---	---	---
	08/14/06		1.8	1.7	77.2	4,680	---	---	---	ND (0.02)
	10/16/06		1.8	1.6	---	---	---	---	---	---
	12/08/06		2.0	1.9	70.4	4,340	---	---	---	ND (0.02)
	02/14/07		2.0	1.9	76.9	4,700	---	---	---	ND (0.02)
	04/11/07		2.2	5.6	75.7	4,440	---	---	---	ND (0.02)
	08/16/07		2.0	2.2	80.6	4,600	---	---	---	ND (0.02)
	08/16/07	FD	2.2	2.3	80.4	4,690	---	---	---	ND (0.02)
	12/11/07		1.8	1.9	76.1	5,220	---	---	---	ND (0.02)

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-03	02/12/08		2.0	2.0	84.8	4,160	---	---	---	ND (0.02)
	04/11/08		2.3	2.3	82.0	4,180	---	---	---	ND (0.02)
	06/09/08		1.9	2.1	83.5	4,510	---	---	---	---
	08/07/08		2.0	2.1	89.6J	4,400	---	---	---	0.0227
	10/09/08		---	---	72.4	4,100	---	---	---	---
	11/05/08		2.0	1.7	84.3	4,280	---	---	---	ND (0.02)
	02/04/09		1.7	2.2	86.9	4,380	---	---	---	ND (0.02)
	05/13/09		2.1	2.0	96.4J	4,350	---	---	---	ND (0.02)
	08/07/09		2.2	1.9	---	4,760	---	---	---	ND (0.02)
	08/10/09		---	---	93.0	---	---	---	---	---
	11/10/09		1.9	1.9	103	4,420	---	---	---	ND (0.02)
	02/09/10		2.0	1.6	95.8	4,020	---	---	---	ND (0.02)
	05/12/10		2.0	1.8	113	4,690	---	---	---	---
	08/19/10		ND (2.5)	1.8	138	4,940	---	---	---	ND (0.02)
	10/28/10		1.5J	1.0J	91.8	4,780	---	---	---	ND (0.02)
	01/26/11		2.1	1.5	133	4,580	---	---	---	ND (0.02)
	05/05/11		2.2	2.0	140	4,880	---	---	---	ND (0.02)
	05/05/11	FD	2.4	1.9	142	4,780	---	---	---	ND (0.02)
	07/28/11		1.3	1.1	75.9	4,140	---	---	---	ND (0.02)
	11/01/11		ND (0.46)	ND (1.1)	103	4,400	---	---	---	ND (0.02)
	01/12/12		1.5	1.9	159	4,340	---	---	---	ND (0.02)
	04/10/12		1.2	2.1	141J	4,060	---	---	---	0.075
	07/24/12		1.4	2.6	152	4,300	---	---	---	0.0441
	10/17/12		1.5	1.4	145	4,500	---	---	---	ND (0.02)
	01/31/13		1.6	2.1	156	4,400	---	---	---	ND (0.02)
	04/16/13		1.4	1.8	148	4,320	---	---	---	ND (0.02)
	07/31/13		1.2	2.0	173	4,520	---	---	---	ND (0.02)
	10/15/13		1.2	1.3	191	4,680	---	---	---	0.0247
	01/24/14		1.4	1.3	201	4,520	---	---	---	ND (0.02)
	04/15/14		1.4	1.5	---	---	87.3	12.7	81.0	---
	04/15/14		---	---	---	---	41.7JS	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
DW-03	04/15/14	FD	1.4	1.5	---	---	59.2JS	ND (9.18)	80.0	---
	04/15/14	FD	---	---	---	---	59.2JS	---	---	---
	07/22/14		1.4	2.1	---	---	---	---	---	---
EX-05	01/25/06		0.35	1.2	---	---	---	---	---	---
	02/21/06		ND (0.2)	ND (1.0)	6.05	669	---	---	---	---
	06/10/08		0.25	ND (1.0)	7.92	864	---	---	---	---
	08/07/08		2.0	2.6	7.29	726	---	---	---	---
	11/04/10		1.1	3.8	6.90	700	---	---	---	---
	03/31/11		10.2	9.3	8.40	788	---	---	---	---
	05/02/11		---	---	8.50	780	---	---	---	0.0238
	06/16/11		9.5	10.1	8.30	784	---	---	---	---
	09/15/11		9.1	8.4	8.15	830	---	---	---	---
	10/26/11		9.4	8.8	8.04	768	---	---	---	---
	01/30/12		8.8	8.7	8.16	800	---	---	---	---
	07/27/12		2.5	2.8	7.67	770	---	---	---	---
	10/11/12		7.3	6.7	17.0	718	---	---	---	---
	01/31/13		3.0	3.5	7.06	706	---	---	---	---
	06/04/13		2.4	2.8	6.69	670	---	---	---	---
	07/19/13		ND (0.2)	ND (1.0)	6.00	740	---	---	---	---
	10/09/13		3.6	3.4	7.00	690	---	---	---	---
	01/13/14		1.6	1.5	7.20	680	---	---	---	---
	04/03/14		0.92	1.2	6.20	680	---	---	---	---
	07/09/14		3.1	3.2	7.20	690	---	---	---	---
07/09/14	FD	2.9	3.1	7.30	700	---	---	---	---	
EX-10	09/06/06		0.25	ND (1.0)	---	---	---	---	---	---
	12/14/06		ND (0.2)	ND (1.0)	4.22	512	---	---	---	---
	02/14/07		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/17/07		0.22	ND (1.0)	---	---	---	---	---	---
	02/13/08		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/11/08		0.3	ND (1.0)	---	---	---	---	---	---
	08/11/08	FD	0.3	ND (1.0)	---	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-10	03/24/10		0.33	ND (1.0)	---	514	---	---	---	---
	05/13/10		0.74	ND (1.0)	4.68	516	---	---	---	---
	08/04/10		1.4	1.7	5.80	---	---	---	---	---
	10/28/10		0.82	1.1	4.54	533	---	---	---	---
	01/27/11		0.53	ND (1.0)	5.41	533	---	---	---	---
	05/02/11		0.55	ND (1.0)	9.42	535	---	---	---	ND (0.02)
	07/28/11		1.8	2.7	9.42	618	---	---	---	---
	10/26/11		1.8	1.8	16.9	704	---	---	---	---
	01/30/12		1.2	3.5	12.3	606	---	---	---	---
	04/19/12		1.3	1.7	9.31	515	---	---	---	---
	07/26/12		1.2	1.4	6.42	500	---	---	---	---
	10/05/12		1.1	1.2	5.76	474	---	---	---	---
	01/31/13		0.73	1.0	5.29	456	---	---	---	---
	04/16/13		0.94	1.2	4.90	451	---	---	---	---
	07/10/13		0.85	ND (1.0)	4.34	432	---	---	---	---
	10/09/13		0.76	ND (1.0)	3.10	420	---	---	---	---
	10/09/13	FD	0.73	1.1	2.88	423	---	---	---	---
	01/15/14		1.0	1.6	3.24	403	---	---	---	---
	04/03/14		1.1	1.3	2.90	410	---	---	---	---
	07/09/14		0.87	1.4	2.70	400	---	---	---	---
EX-15	08/17/06		32.5	26.7	---	---	---	---	---	---
	12/13/06		40.5	34.1	13.8	1,090	---	---	---	---
	06/17/08		25.4	28.3	12.7	1,220	---	---	---	---
	06/30/08		47.9	47.0	13.0	1,200	---	---	---	---
	08/07/08		40.6	39.4	11.3	1,070	---	---	---	---
	08/07/08	FD	40.3	39.7	12.1	1,040	---	---	---	---
	11/05/08		38.6	38.9	11.7	1,060	---	---	---	---
	02/04/09		25.1	21.4	11.9	1,120	---	---	---	---
	05/12/09		42.4	39.9	11.7	1,060	---	---	---	---
	08/12/09		42.6	42.3	13.0	1,000	---	---	---	---
11/10/09		46.4	47.2	13.8	1,130	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-15	02/09/10		40.8	38.5	12.5	1,030	---	---	---	---
	05/12/10		44.8	44.0	11.8	1,040	---	---	---	---
	08/19/10		48.5	46.1	12.6	1,070	---	---	---	---
	10/28/10		46.6	42.6	12.1	1,090	---	---	---	---
	01/27/11		21.4	22.5	13.8	1,060	---	---	---	---
	05/02/11		42.7	44.6	10.9	1,000	---	---	---	0.0263
	07/28/11		40.6	38.7	11.5	1,000	---	---	---	---
	10/26/11		43.5	41.1	11.0	1,010	---	---	---	---
	01/30/12		37.2	36.6	11.0	1,010	---	---	---	---
	04/19/12		36.7	40.0	10.1	936	---	---	---	---
	07/10/12		36.0	34.7	10.9	1,020	---	---	---	---
	10/11/12		32.6J	30.4	8.30	924	---	---	---	---
	01/31/13		30.1	29.9	8.51	996	---	---	---	---
	04/16/13		26.6	26.8	8.52	956	---	---	---	---
	07/19/13		24.0	23.0	6.40	940	---	---	---	---
	10/04/13		20.0	19.0	5.80	900	---	---	---	---
	01/08/14		18.0	16.0	5.26	880	---	---	---	---
04/09/14		16.0	14.0	5.10	820	---	---	---	---	
07/22/14		11.0	11.0	3.90	840	---	---	---	---	
EX-16	08/17/06		49.6	48.3	---	---	---	---	---	---
	10/16/06		36.9	36.2	13.6	1,010	---	---	---	---
	12/14/06		57.0	56.5	16.0	1,110	---	---	---	---
	06/03/08		49.3	51.9	13.3	1,150	---	---	---	---
	06/03/08	FD	47.8	48.0	13.4	1,180	---	---	---	---
	06/17/08		54.9	55.8	13.8	1,190	---	---	---	---
	06/30/08		55.3	51.4	13.3	1,210	---	---	---	---
	08/07/08		49.9	49.2	12.7	1,120	---	---	---	---
	11/05/08		46.6	42.6	12.4	1,110	---	---	---	---
	02/04/09		3.0	2.8	6.40	1,140	---	---	---	---
	05/12/09		46.4	44.5	12.5	1,120	---	---	---	---
05/12/09	FD	46.2	41.4	11.3	1,200	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-16	08/12/09		43.2	44.3	11.8	1,180	---	---	---	---
	11/10/09		29.2	28.6	10.7	1,170	---	---	---	---
	02/09/10		40.3	38.4	12.3	1,160	---	---	---	---
	05/12/10		44.6	43.6	11.8	1,210	---	---	---	---
	08/19/10		45.2	41.0	11.3	1,200	---	---	---	---
	10/28/10		41.3	38.2	10.8	1,210	---	---	---	---
	01/27/11		37.5	38.5	11.5	1,250	---	---	---	---
	05/02/11		40.0	43.0	12.0	1,220	---	---	---	0.0305
	07/28/11		35.5	34.8	10.6	1,130	---	---	---	---
	10/26/11		35.4	31.7	8.79	1,140	---	---	---	---
	10/26/11	FD	30.4	33.9	9.29	1,150	---	---	---	---
	01/30/12		35.5	36.2	10.3	1,090	---	---	---	---
	04/19/12		33.2	37.3J	11.0	1,020	---	---	---	---
	07/10/12		21.4	20.3	7.04	938	---	---	---	---
	07/10/12	FD	21.4	21.9	6.31	976	---	---	---	---
	10/19/12		13.9	14.0	3.96	842	---	---	---	---
	01/31/13		14.2	14.2	4.28	832	---	---	---	---
	01/31/13	FD	14.1	14.8	3.98	820	---	---	---	---
	04/16/13		10.2	10.1	3.30	724	---	---	---	---
	07/19/13		9.3	9.3	3.30	780	---	---	---	---
10/04/13		8.2	7.3	2.40	680	---	---	---	---	
01/08/14		6.9	6.2	2.05	660	---	---	---	---	
04/09/14		9.0	8.7	2.70	570	---	---	---	---	
07/22/14		6.6	6.5	2.20	620	---	---	---	---	
EX-17	09/06/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/16/06		ND (0.2)	ND (1.0)	ND (0.20)	260	---	---	---	---
	10/16/06	FD	ND (0.2)	ND (1.0)	ND (0.20)	287	---	---	---	---
	12/12/06		ND (0.2)	ND (1.0)	ND (0.20)	289	---	---	---	---
	06/10/08		ND (0.2)	ND (1.0)	ND (1.00)	279	---	---	---	---
	08/13/08		ND (0.2)	ND (1.0)	ND (1.00)	313	---	---	---	---
	11/06/08		ND (0.2)	ND (1.0)	---	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
EX-17	02/05/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/28/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	01/27/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/02/11		ND (0.2)	ND (1.0)	ND (0.50)	274	---	---	---	0.0312
	07/28/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/26/11		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/30/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/19/12		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	07/10/12		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/11/12		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/01/13		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	04/16/13		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	07/10/13		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/03/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/09/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/02/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
07/08/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---	
EX-20	11/30/06		ND (1.0)	36.3	13.7	---	---	---	---	---
	06/02/08		61.2	63.2	14.2	1,110	---	---	---	---
	06/17/08		51.3	56.4	14.4	1,140	---	---	---	---
	06/30/08		58.9	59.2	14.1	1,170	---	---	---	---
	08/07/08		51.1	54.3	14.0	1,130	---	---	---	---
	11/05/08		51.1	50.0	14.0	1,100	---	---	---	---
	11/05/08	FD	52.4	49.6	13.3	1,090	---	---	---	---
	02/04/09		0.23	ND (1.0)	1.97	1,010	---	---	---	---
	03/30/09		53.0	59.0	13.0	1,100	---	---	---	---
	05/12/09		52.5	49.1	13.0	1,200	---	---	---	---
	08/12/09		50.9	50.8	13.0	1,180	---	---	---	---
	08/12/09	FD	49.7	45.7	13.7	1,170	---	---	---	---
11/10/09		36.7	41.3	11.7	1,150	---	---	---	---	
02/09/10		45.9	44.6	13.1	1,180	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-20	05/12/10		49.2	47.1	12.4	1,220	---	---	---	---
	08/19/10		47.3	43.7	11.4	1,180	---	---	---	---
	10/28/10		43.5	41.0	11.3	1,180	---	---	---	---
	01/27/11		36.9	38.4	11.7	1,180	---	---	---	---
	05/02/11		20.4	20.7	10.5	1,150	---	---	---	0.0244
	07/28/11		37.2	36.9	10.8	1,060	---	---	---	---
	10/26/11		38.7	35.7	9.96	1,040	---	---	---	---
	01/30/12		35.7	37.2	10.2	1,070	---	---	---	---
	04/19/12		34.1	35.3	9.72	1,050	---	---	---	---
	04/19/12	FD	34.1	37.3	9.45	982	---	---	---	---
	07/10/12		28.3	27.3	7.97	1,030	---	---	---	---
	10/11/12		24.2	22.8	6.76J	994	---	---	---	---
	10/11/12	FD	24.3	21.6	8.90J	1,010	---	---	---	---
	01/31/13		3.1	8.5	6.45	1,010	---	---	---	---
	03/11/13		20.7	21.1	6.08	1,070	---	---	---	---
	03/11/13	FD	20.7	22.1	6.11	1,020	---	---	---	---
	04/16/13		17.8	18.9	6.28	976	---	---	---	---
	07/19/13		17.0	17.0	4.90	920	---	---	---	---
	07/19/13	FD	17.0	16.0	5.10	950	---	---	---	---
	10/04/13		16.0	18.0	4.50	890	---	---	---	---
01/08/14		14.0	12.0	4.01	860	---	---	---	---	
04/09/14		14.0	14.0	3.90	840	---	---	---	---	
07/22/14		13.0	13.0	3.80	820	---	---	---	---	
07/22/14	FD	13.0	13.0	3.80	830	---	---	---	---	
EX-21	04/10/09		17.1	24.0	8.56	1,080J	---	---	---	---
	11/10/09		25.7	26.2	8.18	1,080	---	---	---	---
	02/09/10		34.5	32.3	9.52	1,150	---	---	---	---
	05/12/10		39.8	39.2	10.6	1,140	---	---	---	---
	08/19/10		45.3	40.0	10.2	1,190	---	---	---	---
	10/28/10		42.9	38.1	10.2	1,200	---	---	---	---
	01/27/11		42.3	38.5	9.25	1,150	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-21	05/02/11		16.5	24.1	8.73	1,120	---	---	---	0.0312
	08/18/11		28.9	31.0	10.8	1,130	---	---	---	---
	06/28/12		18.8	19.0	4.90	866	---	---	---	---
	08/06/12		3.4	5.2	3.60	770	---	---	---	---
	11/07/12		10.0	9.8	3.10	680	---	---	---	---
	02/07/13		8.8	7.9	2.30	610	---	---	---	---
	05/15/13		6.9	6.2	2.10	560	---	---	---	---
	08/08/13		5.7	5.7	1.80	520	---	---	---	---
	08/08/13	FD	5.6	6.1	1.70	510	---	---	---	---
	11/06/13		6.0	5.4	1.80	540	---	---	---	---
	02/04/14		4.7	4.8	1.50	500	---	---	---	---
	05/07/14		4.0	4.0	1.40	500	---	---	---	---
	08/06/14		ND (0.2)	ND (1.0)	1.50	430	---	---	---	---
EX-22	04/03/09		14.9	24.2	11.0	1,140	---	---	---	---
	11/10/09		37.5	38.3	12.6	1,270	---	---	---	---
	11/10/09	FD	37.2	38.4	12.4	1,240	---	---	---	---
	05/12/10		42.0	39.2	12.8	1,140	---	---	---	---
	08/19/10		43.3	39.7	10.3	1,120	---	---	---	---
	10/28/10		45.4	39.5	12.2	1,150	---	---	---	---
	01/27/11		39.1	36.8	12.8	1,150	---	---	---	---
	05/02/11		11.0	13.1	11.8	1,020	---	---	---	0.036
	08/18/11		40.8	42.2	11.8	1,060	---	---	---	---
	04/19/12		43.3	46.6	13.1	1,090	---	---	---	---
	08/06/12		0.78	4.4	5.50	760	---	---	---	---
	11/07/12		32.0	31.0	7.90	1,000	---	---	---	---
	02/07/13		34.0	31.0	7.60	1,100	---	---	---	---
	05/15/13		31.0	28.0	7.20	1,100	---	---	---	---
	08/08/13		26.0	25.0	6.10	990	---	---	---	---
	11/12/13		25.0	22.0	5.40	1,000	---	---	---	---
	02/04/14		28.0	27.0	6.00	1,000	---	---	---	---
02/04/14	FD	28.0	27.0	5.90	1,000	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-22	05/07/14		25.0	25.0	5.80	1,000	---	---	---	---
	08/06/14		1.4	7.4	4.30	870	---	---	---	---
EX-29	12/13/11		7.6	18.1	12.0	1,020	---	---	---	ND (0.02)
	06/14/12		39.5	39.3	11.5	1,040	---	---	---	---
	07/20/12		36.6	36.1	11.2	1,040	---	---	---	---
	08/09/12		36.7	41.5	11.2J	1,050J	---	---	---	---
	09/11/12		39.2	40.9	10.5	1,020	---	---	---	---
	10/11/12		35.6	32.2	6.87	1,020	---	---	---	---
	11/09/12		36.6	38.0	9.98	1,010	---	---	---	---
	12/05/12		32.4	31.4	10.3	1,030	---	---	---	---
	01/31/13		32.8	35.3	8.20	1,000	---	---	---	---
	04/16/13		30.8	31.4	8.99	946	---	---	---	---
	04/16/13	FD	30.9	30.5	8.96	980	---	---	---	---
	07/19/13		23.0	22.0	7.50	970	---	---	---	---
	10/04/13		20.0	18.0	7.40	930	---	---	---	---
	01/08/14		19.0	17.0	7.11	920	---	---	---	---
	04/09/14		16.0	16.0	7.40	900	---	---	---	---
04/09/14	FD	16.0	16.0	7.00	910	---	---	---	---	
07/22/14		11.0	12.0	7.30	880	---	---	---	---	
EX-30	12/13/11		15.9	28.8	12.8	1,130	---	---	---	ND (0.02)
	06/14/12		39.6	39.9	13.6	1,210	---	---	---	---
	07/20/12		37.5	37.3	13.4	1,240	---	---	---	---
	08/09/12		34.5	38.9	13.6J	1,200J	---	---	---	---
	09/11/12		38.1	41.8	13.7	1,240	---	---	---	---
	10/11/12		40.6	37.8	14.5	1,270	---	---	---	---
	11/09/12		41.8	42.0	13.8	1,210	---	---	---	---
	12/05/12		40.8	43.2	12.7	1,230	---	---	---	---
	01/31/13		41.0	44.0	13.2	1,260	---	---	---	---
	04/16/13		42.2	42.5	12.9	1,200	---	---	---	---
	07/19/13		43.0	40.0	12.0	1,300	---	---	---	---
10/04/13		45.0	40.0	12.0	1,200	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
EX-30	01/08/14		47.0	43.0	13.1	1,300	---	---	---	---
	04/09/14		46.0	43.0	13.0	1,200	---	---	---	---
	07/22/14		41.0	43.0	11.0	1,200	---	---	---	---
EX-36	04/16/14		1.8	1.7	2.60	460	---	---	6.60	---
	05/15/14		1.9	---	---	---	---	---	---	---
	05/15/14	FD	2.0	---	---	---	---	---	---	---
	05/22/14		1.9	2.3	---	---	---	---	---	---
	06/02/14		1.8	1.6	---	---	---	---	---	---
	07/10/14		1.8	1.7	---	---	---	---	---	---
	08/07/14		1.6	1.9	---	---	---	---	---	---
	09/15/14		1.6	2.1	---	---	---	---	---	---
MW-09	05/01/88		ND (10.0)	ND (10.0)	9.70	922	---	---	---	---
	05/01/88	FD	ND (10.0)	ND (10.0)	---	---	---	---	---	---
	02/23/94		---	30.0	---	---	---	---	---	---
	05/31/94		---	10.0J	---	---	---	---	---	---
	08/12/94		---	ND (10.0)	---	---	---	---	---	---
	10/27/94		---	ND (10.0)	---	---	---	---	---	---
	02/08/95		---	30.0	---	---	---	---	---	---
	04/04/95		---	40.0	---	---	---	---	---	---
	08/17/95		---	20.0	---	---	---	---	---	---
	10/05/95		---	30.0	---	---	---	---	---	---
	02/28/96		---	40.0	---	---	---	---	---	---
	04/03/96		---	30.0	---	---	---	---	---	---
	04/03/96	FD	---	40.0	---	---	---	---	---	---
	07/31/96		---	20.0	---	---	---	---	---	---
	10/04/96		---	50.0	---	---	---	---	---	---
	02/05/97		---	20.0	---	---	---	---	---	---
	02/05/97	FD	---	24.0	---	---	---	---	---	---
04/09/97		---	24.0	---	---	---	---	---	---	
07/30/97		---	31.0	36.0	---	---	---	---	---	
10/09/97		---	---	35.0	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-09	03/05/98		---	17.0J	---	---	---	---	---	---
	05/21/98		---	ND (10.0)	---	---	---	---	---	---
	08/13/98		---	18.0J	---	---	---	---	---	---
	11/19/98		---	36.0	---	---	---	---	---	---
	02/24/99		---	17.0J	---	---	---	---	---	---
	05/26/99		---	15.0J	---	---	---	---	---	---
	08/26/99		---	23.0	---	---	---	---	---	---
	11/11/99		---	11.0J	---	---	---	---	---	---
	02/09/00		---	26.0	---	---	---	---	---	---
	05/03/00		---	28.0	---	---	---	---	---	---
	08/10/00		---	24.0	---	---	---	---	---	---
	11/09/00		---	25.0	---	---	---	---	---	---
	03/08/01		---	10.0J	---	---	---	---	---	---
	05/23/01		30.0	29.0	---	---	---	---	---	---
	07/05/01		10.0J	11.0	---	---	---	---	---	---
	08/15/01		9.4	9.3	---	---	---	---	---	---
	10/05/01		24.0	32.0	---	---	---	---	---	---
	10/05/01	FD	ND (10.0)	8.2	---	---	---	---	---	---
	10/25/01		32.0	32.0	---	---	---	---	---	---
	11/20/01		44.0	37.0	---	---	---	---	---	---
	12/12/01		52.0	35.0	---	---	---	---	---	---
	12/12/01	FD	33.0	32.0	---	---	---	---	---	---
	01/23/02		24.6	23.0	---	---	---	---	---	---
	02/14/02		34.5	35.7	---	---	---	---	---	---
	02/14/02	FD	33.0	36.7	---	---	---	---	---	---
	03/27/02		33.2	38.1	---	---	---	---	---	---
	04/16/02		33.0	31.7	---	---	---	---	---	---
	05/16/02		44.2	38.9	---	---	---	---	---	---
	06/27/02		48.4	43.7	---	---	---	---	---	---
	07/24/02		45.3	42.1	---	---	---	---	---	---
	07/24/02	FD	45.2	45.6	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-09	08/16/02		29.3	29.6	---	---	---	---	---	---
	09/26/02		27.1	30.4	---	---	---	---	---	---
	10/14/02		29.1	32.8	---	---	---	---	---	---
	11/11/02		39.3	41.0	---	---	---	---	---	---
	12/16/02		43.5	43.0	---	---	---	---	---	---
	01/23/03		40.7	44.9	---	---	---	---	---	---
	01/23/03	FD	40.0	40.5	---	---	---	---	---	---
	02/17/03		34.3	36.8	---	---	---	---	---	---
	02/17/03	FD	34.4	36.2	---	---	---	---	---	---
	03/26/03		30.4	30.2	---	---	---	---	---	---
	03/26/03	FD	30.3	29.0	---	---	---	---	---	---
	04/16/03		28.9	30.6	---	---	---	---	---	---
	04/16/03	FD	28.2	31.7	---	---	---	---	---	---
	06/25/03		45.1J	43.8	---	---	---	---	---	---
	06/25/03	FD	45.4	47.1	---	---	---	---	---	---
	08/12/03		48.6	49.3	---	---	---	---	---	---
	08/12/03	FD	47.8	51.1	---	---	---	---	---	---
	10/28/03		42.9	43.2	---	---	---	---	---	---
	10/28/03	FD	42.2	42.9	---	---	---	---	---	---
	12/01/03		48.5	54.4J	---	---	---	---	---	---
	12/01/03	FD	47.6	56.9J	---	---	---	---	---	---
	02/20/04		52.0J	50.2	---	---	---	---	---	---
	02/20/04	FD	47.5J	51.0	---	---	---	---	---	---
	04/27/04		46.2	45.6	---	---	---	---	---	---
	06/15/04		34.2	34.1	---	---	---	---	---	---
	08/25/04		19.0	21.9	---	---	---	---	---	---
	08/25/04	FD	18.9	20.6	---	---	---	---	---	---
	10/14/04		15.8	15.6	---	---	---	---	---	---
	12/07/04		15.0	17.6	---	---	---	---	---	---
	02/11/05		10.7	14.4	---	---	---	---	---	---
	02/11/05	FD	12.5	13.5	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-09	04/14/05		7.2	8.4	---	---	---	---	---	---
	04/14/05	FD	7.2	8.6	---	---	---	---	---	---
	08/18/05		2.1	2.2	---	---	---	---	---	---
	08/18/05	FD	2.1	2.1	---	---	---	---	---	---
	12/07/05		2.3	2.5	---	---	---	---	---	---
	02/15/06		2.4	6.7	---	---	---	---	---	---
	02/15/06	FD	2.4	6.5	---	---	---	---	---	---
	08/16/06		2.1	1.8	---	---	---	---	---	---
	02/21/07		2.2	2.7	---	---	---	---	---	---
	08/22/07		1.7	1.6	---	---	---	---	---	---
	02/15/08		1.8	1.6	---	---	---	---	---	---
	08/05/08		1.5	1.4J	---	---	---	---	---	---
	03/09/10		1.5	1.4	---	---	---	---	---	---
	08/24/10		1.6	1.5	---	---	---	---	---	---
	08/24/10	FD	1.7	1.4	---	---	---	---	---	---
	08/03/11		1.3	1.5	---	---	---	---	---	---
	05/02/12		1.3	1.1	14.0	---	---	---	---	---
	07/27/12		1.4	1.2	12.0	---	---	---	---	---
	11/07/12		1.3	1.2	13.0	---	---	---	---	---
	02/07/13		1.3	---	13.0	---	---	---	---	---
	05/01/13		1.4	---	12.0	---	---	---	---	---
	08/06/13		1.6	1.3	12.0	---	---	---	---	---
	11/08/13		1.7	---	12.0	---	---	---	---	---
11/08/13	FD	1.6	---	12.0	---	---	---	---	---	
02/05/14		1.5	---	11.0	---	---	---	---	---	
05/07/14		1.4	---	12.0	---	---	---	---	---	
08/06/14		1.6	1.7	10.0	---	---	---	---	---	
MW-10	05/01/88		100	50.0	17.5	1,780	---	---	---	---
	02/22/94		---	80.0	---	---	---	---	---	---
	05/31/94		---	60.0	---	---	---	---	---	---
	08/10/94		---	70.0	---	---	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-10	08/10/94	FD	---	70.0	---	---	---	---	---	---
	10/25/94		---	50.0	---	---	---	---	---	---
	02/07/95		---	80.0	---	---	---	---	---	---
	04/05/95		---	70.0	---	---	---	---	---	---
	08/15/95		---	60.0	---	---	---	---	---	---
	10/05/95		---	80.0	---	---	---	---	---	---
	02/28/96		---	90.0	---	---	---	---	---	---
	04/03/96		---	80.0	---	---	---	---	---	---
	05/22/96		---	90.0	---	---	---	---	---	---
	07/31/96		---	70.0	---	---	---	---	---	---
	10/01/96		---	80.0	---	---	---	---	---	---
	02/04/97		75.0	86.0	---	---	---	---	---	---
	04/08/97		---	88.0	---	---	---	---	---	---
	07/30/97		77.0	81.0	---	---	---	---	---	---
	10/08/97		71.0	76.0	---	---	---	---	---	---
	03/04/98		90.0	77.0	---	---	---	---	---	---
	05/19/98		85.0	84.0	---	---	---	---	---	---
	08/11/98		78.0	79.0	---	---	---	---	---	---
	11/16/98		95.0	93.0	---	---	---	---	---	---
	02/24/99		58.0	88.0	---	---	---	---	---	---
	05/27/99		48.0	56.0	---	---	---	---	---	---
	08/26/99		28.0	55.0	---	---	---	---	---	---
	11/11/99		59.0	62.0	---	---	---	---	---	---
	02/10/00		61.0	64.0	---	---	---	---	---	---
	08/10/00		56.0	52.0	---	---	---	---	---	---
	11/07/00		41.0	56.0	---	---	---	---	---	---
	03/09/01		51.0	48.0	---	---	---	---	---	---
	05/24/01		35.0	33.0	---	---	---	---	---	---
	10/05/01		32.0	40.0	---	---	---	---	---	---
	10/05/01	FD	30.0	30.0	---	---	---	---	---	---
	12/11/01		34.0	37.0	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-10	12/11/01		35.0	34.0	---	---	---	---	---	---
	02/14/02		41.0	35.8	---	---	---	---	---	---
	05/17/02		34.0	32.1	---	---	---	---	---	---
	05/17/02	FD	38.0	30.8	---	---	---	---	---	---
	11/14/02		28.1	28.7	---	---	---	---	---	---
	02/17/03		27.9	29.4	---	---	---	---	---	---
	06/24/03		16.8	19.5	---	---	---	---	---	---
	08/13/03		16.2	18.4	---	---	---	---	---	---
	10/30/03		14.8	19.5	---	---	---	---	---	---
	12/01/03		13.5	23.5J	---	---	---	---	---	---
	02/16/04		13.8	18.0	---	---	---	---	---	---
	04/28/04		13.4	15.4	---	---	---	---	---	---
	06/14/04		13.8	14.4	---	---	---	---	---	---
	08/24/04		14.2	16.5	---	---	---	---	---	---
	10/14/04		15.1	15.3	---	---	---	---	---	---
	12/07/04		---	16.2	---	---	---	---	---	---
	02/10/05		12.5	14.0	---	---	---	---	---	---
	04/11/05		12.9	14.3	---	---	---	---	---	---
	06/06/05		12.7	13.6	---	---	---	---	---	---
	08/17/05		12.7	12.8	---	---	---	---	---	---
	10/13/05		12.5	12.4	---	---	---	---	---	---
	12/07/05		14.1	15.1	---	---	---	---	---	---
	02/22/06		14.2	16.9	---	---	---	---	---	---
	08/09/06		14.8	13.8	---	---	---	---	---	---
	10/17/06		17.4	16.6	11.8	970	---	---	---	---
	12/05/06		21.2	17.6	13.1	1,060	---	---	---	---
	02/13/07		18.7	17.8	---	---	---	---	---	---
	08/15/07		19.3	19.0	---	---	---	---	---	---
	02/13/08		24.3	23.3	---	---	---	---	---	---
	08/05/08		27.6	26.9	---	---	---	---	---	---
	02/05/09		31.1	28.7	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-10	05/12/09		---	---	12.4	914	---	---	---	---
	08/10/09		31.0	27.7	11.0	922	---	---	---	---
	02/10/10		24.9	23.2	---	966	---	---	---	---
	08/03/10		28.8	26.2	---	908	---	---	---	---
	01/28/11		32.1	28.6	---	994	---	---	---	---
	05/05/11		---	---	22.0	910	---	---	---	ND (0.02)
	08/03/11		36.6	39.7	---	1,010	---	---	---	---
	12/13/11		43.8	36.8J	10.9	958	---	---	---	---
	12/13/11	FD	43.8	46.9J	11.3	928	---	---	---	---
	02/01/12		41.4	43.0	12.2	1,010	---	---	---	---
	02/01/12	FD	40.9	42.4	12.4	1,040	---	---	---	---
	04/27/12		40.3	43.0	11.0	958	---	---	---	---
	04/27/12	FD	40.3	37.8	10.9	946	---	---	---	---
	08/07/12		36.0	34.0	8.40	980	---	---	---	---
	11/07/12		38.0	35.0	9.20	1,000	---	---	---	---
	02/08/13		35.0	30.0	9.00	1,000	---	---	---	---
	05/02/13		32.0	27.0	9.00	1,000	---	---	---	---
	08/06/13		29.0	25.0	8.30	1,000	---	---	---	---
	11/08/13		27.0	23.0	7.60	960	---	---	---	---
	02/05/14		27.0	26.0	7.10	960	---	---	---	---
05/07/14		29.0	---	6.20	---	45.6	6.53	36.0	---	
08/06/14		22.0	23.0	5.80	960	---	---	---	---	
08/06/14	FD	22.0	23.0	5.70	970	---	---	---	---	
MW-101D	06/16/11		16.4	18.2	7.79	1,190	---	---	---	---
	07/29/11		14.8	12.6	---	---	---	---	---	---
	10/25/11		13.3	13.7	---	---	---	---	---	---
	02/02/12		11.3	11.5	---	---	---	---	---	---
	04/30/12		12.2	12.6	---	---	---	---	---	---
	07/25/12		9.1	9.9	---	---	---	---	---	---
	10/09/12		2.1	2.6	4.06	---	---	---	---	---
	01/21/13		6.6	6.8	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-101D	04/09/13		11.5	12.2	---	---	---	---	---	---
	07/11/13		8.5	9.9	---	---	---	---	---	---
	10/16/13		5.6	6.5	---	---	---	---	---	---
	01/21/14		6.0	6.1	---	---	---	---	---	---
	04/03/14		9.3	9.6	---	---	21.7	5.78	15.0	---
	07/09/14		6.9	6.2	---	---	---	---	---	---
MW-107D	06/16/11		0.22	ND (1.0)	ND (0.50)	590	---	---	---	---
	08/03/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	10/25/11		0.57	ND (1.0)	---	---	---	---	---	---
	02/02/12		0.13	ND (1.0)	---	---	---	---	---	---
	04/23/12		0.23	ND (1.0)	ND (0.05)	340	---	---	---	---
	07/19/12		0.39	ND (1.0)	---	---	---	---	---	---
	10/08/12		0.51	ND (1.0)	---	---	---	---	---	---
	01/30/13		0.45	ND (1.0)	---	---	---	---	---	---
	04/17/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	07/10/13		1.8J	ND (1.0)	---	---	---	---	---	---
	07/31/13		0.58	ND (1.0)	---	---	---	---	---	---
	10/10/13		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	01/14/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	04/16/14		0.86	ND (1.0)	---	---	4.51J	ND (4.00)	ND (0.67)	---
	07/22/14		0.56	ND (1.0)	---	---	---	---	---	---
MW-107S	06/16/11		1.0	1.8	0.78	734	---	---	---	---
	08/03/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/16/11		0.83	1.2	2.12	850	---	---	---	---
	09/14/11		0.9	ND (1.0)	---	---	---	---	---	---
	09/14/11	FD	0.87	1.1	---	---	---	---	---	---
	10/25/11		0.99	1.1	---	---	---	---	---	---
	11/14/11		0.94	1.4	---	---	---	---	---	---
	02/02/12		0.85	1.2	---	---	---	---	---	---
	04/19/12		0.79	1.3	1.55	784	---	---	---	---
07/31/12		0.38	1.1	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-107S	10/09/12		1.9	2.0	---	---	---	---	---	---
	01/25/13		1.8	2.1	---	---	---	---	---	---
	04/17/13		0.58	1.1	---	---	---	---	---	---
	07/16/13		0.94	1.2	---	---	---	---	---	---
	10/10/13		1.0	1.1	---	---	---	---	---	---
	01/14/14		1.0	1.8	---	---	---	---	---	---
	04/16/14		2.1	2.1	---	---	28.9J	4.78J	23.0	---
	04/16/14	FD	2.2	2.2	---	---	30.6	7.95J	23.0	---
	07/22/14		2.1	2.5	---	---	---	---	---	---
MW-108D	06/06/11		---	---	9.51	1,140	---	---	---	0.0283
	08/03/11		33.1	35.9	---	---	---	---	---	---
	10/25/11		42.7	41.2	---	---	---	---	---	---
	10/25/11	FD	40.2	40.5	---	---	---	---	---	---
	02/02/12		45.0	46.8	---	---	---	---	---	---
	04/13/12		40.2	40.8	12.6	1,130	---	---	---	---
	07/25/12		40.5	37.2	---	---	---	---	---	---
	07/25/12	FD	40.4	37.6	---	---	---	---	---	---
	10/09/12		45.0	42.6	13.0	---	---	---	---	---
	10/09/12	FD	44.7	43.8	12.5	---	---	---	---	---
	01/21/13		45.7	44.3	---	---	---	---	---	---
	04/09/13		41.5	39.1	---	---	---	---	---	---
	07/11/13		46.3	49.2	---	---	---	---	---	---
	10/09/13		44.3	41.5	---	---	---	---	---	---
	01/15/14		41.4	46.4	---	---	---	---	---	---
	01/15/14	FD	41.1	45.7	---	---	---	---	---	---
	04/17/14		43.0	42.0	---	---	56.2	9.60	33.0	---
	04/17/14		---	---	---	---	22.9S	---	---	---
	07/23/14		35.0	35.0	---	---	---	---	---	---
MW-108S	06/06/11		---	---	12.5	1,190	---	---	---	0.0251
	08/03/11		15.7	17.1	---	---	---	---	---	---
	10/25/11		25.7	27.7	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-108S	02/02/12		29.2	31.2	---	---	---	---	---	---
	04/13/12		33.6	35.7	14.2	1,150	---	---	---	---
	07/25/12		35.3	35.2	---	---	---	---	---	---
	10/09/12		39.2	38.0	14.8	---	---	---	---	---
	01/21/13		39.0	38.2	---	---	---	---	---	---
	04/09/13		36.2	34.0	---	---	---	---	---	---
	07/11/13		37.4	38.8	---	---	---	---	---	---
	10/09/13		33.3	31.1	---	---	---	---	---	---
	01/15/14		36.3	39.0	---	---	---	---	---	---
	04/17/14		---	---	---	---	22.9S	---	---	---
	04/17/14		39.0	38.0	---	---	41.8	12.0	37.0	---
MW-11A	05/01/88		60.0	ND (10.0)	15.5	664	---	---	---	---
	04/14/08		4.8	15.5	13.6	945	---	---	---	---
	08/16/10		ND (0.2)	1.4	0.22	---	---	---	---	---
	02/01/11		ND (0.2)	ND (1.0)	0.11	---	---	---	---	---
	01/19/12		ND (0.2)	ND (1.0)	0.41	---	---	---	---	---
	08/07/12		ND (0.2)	ND (1.0)	0.077	---	---	---	---	---
	01/14/13		5.8	11.0	1.10	---	---	---	---	---
	04/19/13		0.62	---	---	---	---	---	---	---
	07/18/13		ND (0.06)	---	0.082	---	---	---	---	---
	10/08/13		ND (0.06)	---	---	---	---	---	---	---
	10/08/13	FD	ND (0.06)	---	---	---	---	---	---	---
MW-11B	01/13/14		ND (0.06)	---	---	---	---	---	---	---
	04/11/14		ND (0.11)	---	ND (0.10)	850	4.22	ND (4.00)	1.60	---
	07/21/14		ND (0.06)	---	---	---	---	---	---	---
	05/01/88		3,700	4,200	2.00	698	---	---	---	---
	05/01/88	FD	3,700	4,000	---	---	---	---	---	---
		02/24/94	---	1,900	---	---	---	---	---	---
		06/01/94	---	1,100	---	---	---	---	---	---
		08/10/94	---	1,800	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-11B	10/26/94		---	650	---	---	---	---	---	---
	02/09/95		---	---	7.10	729	---	---	---	---
	02/10/95		---	1,300	---	---	---	---	---	---
	04/06/95		---	1,500	---	---	---	---	---	---
	08/15/95		---	1,100	---	---	---	---	---	---
	10/03/95		---	1,500	---	---	---	---	---	---
	02/28/96		---	530	---	---	---	---	---	---
	04/02/96		---	130	---	---	---	---	---	---
	07/30/96		---	1,600	---	---	---	---	---	---
	10/02/96		---	2,480	---	---	---	---	---	---
	02/05/97		1,340	1,700	---	---	---	---	---	---
	04/09/97		---	1,700	---	---	---	---	---	---
	07/29/97		2,200	2,600	---	---	---	---	---	---
	07/29/97	FD	---	2,600	---	---	---	---	---	---
	10/07/97		2,350	2,400	---	---	---	---	---	---
	10/07/97	FD	2,450	2,500	---	---	---	---	---	---
	03/02/98		2,450	2,300	---	---	---	---	---	---
	03/02/98	FD	2,360	2,200	---	---	---	---	---	---
	05/19/98		923	980	---	---	---	---	---	---
	05/19/98	FD	934	970	---	---	---	---	---	---
	08/11/98		889	910	---	---	---	---	---	---
	08/11/98	FD	927	930	---	---	---	---	---	---
	11/19/98		927	840	---	---	---	---	---	---
	11/19/98	FD	906	880	---	---	---	---	---	---
	02/23/99		901	880	---	---	---	---	---	---
	02/23/99	FD	853	910	---	---	---	---	---	---
	05/25/99		837	930	---	---	---	---	---	---
	05/25/99	FD	839	920	---	---	---	---	---	---
	08/24/99		1,150	1,300	---	---	---	---	---	---
	08/24/99	FD	1,050	1,300	---	---	---	---	---	---
	11/11/99		1,180	1,200	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-11B	11/11/99	FD	1,120	1,200	---	---	---	---	---	---
	02/10/00		1,680	1,800	---	---	---	---	---	---
	02/10/00	FD	1,640	1,700	---	---	---	---	---	---
	05/02/00		730	750	---	---	---	---	---	---
	05/02/00	FD	727	760	---	---	---	---	---	---
	08/10/00		130	130	---	---	---	---	---	---
	08/10/00	FD	140	130	---	---	---	---	---	---
	11/08/00		216	210	---	---	---	---	---	---
	11/08/00	FD	207	210	---	---	---	---	---	---
	03/07/01		753	750	---	---	---	---	---	---
	03/07/01	FD	738	730	---	---	---	---	---	---
	05/22/01		1,350	1,400	---	---	---	---	---	---
	05/22/01	FD	1,470	1,400	---	---	---	---	---	---
	09/26/01		1,700	1,800	---	---	---	---	---	---
	09/26/01	FD	1,700	1,800	---	---	---	---	---	---
	12/05/01		1,800	1,800	---	---	---	---	---	---
	12/05/01	FD	2,100	1,800	---	---	---	---	---	---
	02/11/02		1,840	1,820	---	---	---	---	---	---
	05/20/02		1,950	1,920	---	---	---	---	---	---
	08/21/02		1,900	1,910	---	---	---	---	---	---
	11/11/02		1,790J	1,790	---	---	---	---	---	---
	02/18/03		1,900	1,720	4.43	752	---	---	---	---
	08/13/03		1,780	2,250	---	---	---	---	---	---
	02/19/04		1,890	2,120	---	---	---	---	---	---
	08/31/04		1,780	1,880	---	---	---	---	---	---
	02/10/05		1,740	1,600	---	---	---	---	---	---
	08/24/05		1,760	1,890	---	---	---	---	---	---
	12/08/05		1,720	1,770	---	---	---	---	---	---
	01/24/06		1,400	1,350	---	---	---	---	---	---
	02/16/06		1,810	2,000	---	---	---	---	---	---
	08/16/06		1,630	1,770	---	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-11B	12/11/06		1,330	1,130	---	---	---	---	---	---
	02/16/07		1,770	1,650	---	---	---	---	---	---
	03/07/07		1,150	1,730	---	---	---	---	---	---
	08/14/07		1,710	1,800	---	---	---	---	---	---
	09/20/07		1,580	1,640	---	---	---	---	---	---
	02/20/08		1,700	1,520	---	---	---	---	---	---
	03/19/08		1,490	1,800	---	---	---	---	---	---
	08/14/08		1,640	1,490	---	---	---	---	---	---
	09/23/08		1,720	1,610	---	---	---	---	---	---
	02/06/09		1,470	1,580	---	---	---	---	---	---
	03/30/09		1,630	1,580	---	---	---	---	---	---
	03/24/10		1,660	1,440	---	---	---	---	---	---
	05/20/10		1,710	1,720	3.70	---	---	---	---	---
	08/16/10		2,170	1,930	3.30	---	---	---	---	---
	11/01/10		1,660	1,560	3.50	---	---	---	---	---
	01/31/11		1,690	1,640	3.50	---	---	---	---	---
	07/29/11		1,700	1,520	---	---	---	---	---	---
	02/01/12		1,600	1,620	---	---	---	---	---	---
	05/02/12		1,600	1,600	3.90	---	---	---	---	---
	08/07/12		1,600	1,500	3.90	---	---	---	---	---
	01/22/13		1,510	1,440	---	---	---	---	---	---
	04/19/13		1,500	---	---	---	---	---	---	---
	07/18/13		1,500	---	3.90	---	---	---	---	---
07/18/13	FD	1,500	---	4.00	---	---	---	---	---	
10/08/13		1,500	---	---	---	---	---	---	---	
01/13/14		1,400	1,500	---	---	---	---	---	---	
04/11/14		1,500	---	3.60	600	35.5	6.31	24.0	---	
07/21/14		1,400	1,400	---	---	---	---	---	ND (0.10)	
MW-124D	08/02/11		0.26	ND (1.0)	ND (0.50)	350J	---	---	---	---
	08/02/11	FD	0.25	ND (1.0)	ND (0.50)	682J	---	---	---	---
	10/27/11		ND (0.067)	ND (1.0)	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-124D	01/30/12		0.12	ND (1.0)	---	---	---	---	---	---
	04/23/12		ND (0.06)	ND (1.0)	0.077	350	---	---	---	---
	07/16/12		0.34	ND (1.0)	---	---	---	---	---	---
	07/16/12	FD	0.26	ND (1.0)	---	---	---	---	---	---
	10/02/12		ND (0.15)	ND (1.0)	---	---	---	---	---	---
	01/30/13		0.38	ND (1.0)	---	---	---	---	---	---
	04/16/13		0.37	ND (1.0)	---	---	---	---	---	---
	07/16/13		0.24	ND (1.0)	---	---	---	---	---	---
	10/11/13		0.33	ND (1.0)	---	---	---	---	---	---
	01/20/14		0.32	ND (1.0)	---	---	---	---	---	---
	01/20/14	FD	0.32	ND (1.0)	---	---	---	---	---	---
	04/17/14		0.61	ND (1.0)	---	---	10.4	ND (4.00)	9.40	---
	07/15/14		0.46	ND (1.0)	---	---	---	---	---	---
MW-124S1	08/02/11		0.48	ND (1.0)	3.11	558	---	---	---	---
	09/15/11		0.95	1.3	---	---	---	---	---	---
	10/27/11		1.5	1.6	---	---	---	---	---	---
	11/17/11		2.0	2.1	---	---	---	---	---	---
	01/30/12		1.5	1.6	---	---	---	---	---	---
	01/30/12	FD	1.5	1.6	---	---	---	---	---	---
	04/26/12		2.1	2.5	0.577	368	---	---	---	---
	07/25/12		2.0	2.2	---	---	---	---	---	---
	10/10/12		2.1	2.5	---	---	---	---	---	---
	01/22/13		1.9	2.2	---	---	---	---	---	---
	04/16/13		2.1	2.4	---	---	---	---	---	---
	07/16/13		2.0	3.3	---	---	---	---	---	---
	10/11/13		2.0	2.4	---	---	---	---	---	---
01/20/14		2.2	2.5	---	---	---	---	---	---	
04/17/14		2.6	2.7	---	---	6.67	ND (4.00)	5.60	---	
07/15/14		2.5	2.7	---	---	---	---	---	---	
MW-14A	05/01/88		140	140	12.8	930	---	---	---	---
	02/23/94		---	70.0	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-14A	06/01/94		---	180	---	---	---	---	---	---
	08/09/94		---	150	---	---	---	---	---	---
	10/25/94		---	130	---	---	---	---	---	---
	02/09/95		---	30.0	---	---	---	---	---	---
	04/04/95		---	130	---	---	---	---	---	---
	08/15/95		---	170	---	---	---	---	---	---
	10/05/95		---	190	---	---	---	---	---	---
	02/27/96		---	120	---	---	---	---	---	---
	04/02/96		---	140	---	---	---	---	---	---
	07/29/96		---	170	---	---	---	---	---	---
	10/01/96		---	130	---	---	---	---	---	---
	02/04/97		63.0	74.0	---	---	---	---	---	---
	04/08/97		---	79.0	---	---	---	---	---	---
	07/29/97		61.0	61.0	---	---	---	---	---	---
	10/06/97		55.0	60.0	---	---	---	---	---	---
	03/03/98		44.0	43.0	---	---	---	---	---	---
	05/19/98		41.0	42.0	---	---	---	---	---	---
	08/11/98		40.0	38.0	---	---	---	---	---	---
	11/18/98		39.0	30.0	---	---	---	---	---	---
	02/23/99		140	170	---	---	---	---	---	---
	05/26/99		42.0	51.0	---	---	---	---	---	---
	08/25/99		10.0	22.0	---	---	---	---	---	---
	11/09/99		20.0	23.0	---	---	---	---	---	---
	02/09/00		ND (10.0)	19.0J	---	---	---	---	---	---
	08/09/00		24.0	21.0	---	---	---	---	---	---
	11/08/00		20.0	18.0J	---	---	---	---	---	---
	03/09/01		20.0	15.0J	---	---	---	---	---	---
	05/23/01		20.0	17.0	---	---	---	---	---	---
	08/15/01		42.0	41.0	---	---	---	---	---	---
	10/03/01		15.0	19.0	---	---	---	---	---	---
	10/03/01	FD	26.0	26.0	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-14A	10/25/01		17.0	18.0	---	---	---	---	---	---
	11/20/01		21.0	18.0	---	---	---	---	---	---
	12/11/01		18.0	26.0	---	---	---	---	---	---
	12/11/01	FD	18.0	22.0	---	---	---	---	---	---
	01/23/02		17.5	17.5	---	---	---	---	---	---
	02/11/02		18.0	18.3	---	---	---	---	---	---
	03/26/02		17.3	22.7	---	---	---	---	---	---
	03/26/02	FD	17.2	24.6	---	---	---	---	---	---
	04/16/02		17.3	20.9	---	---	---	---	---	---
	05/17/02		15.8	16.7	---	---	---	---	---	---
	06/27/02		19.9	19.6	---	---	---	---	---	---
	07/25/02		18.8	21.9	---	---	---	---	---	---
	08/16/02		18.6	23.7	---	---	---	---	---	---
	09/26/02		21.4	24.7	---	---	---	---	---	---
	10/14/02		2.1	25.4	---	---	---	---	---	---
	11/12/02		23.0	24.5	---	---	---	---	---	---
	12/16/02		21.4	22.9	---	---	---	---	---	---
	01/23/03		2.0	21.3	---	---	---	---	---	---
	02/18/03		20.6	21.6	15.0	1,150	---	---	---	---
	03/26/03		22.4	21.2	---	---	---	---	---	---
	04/16/03		20.5	22.1	---	---	---	---	---	---
	08/14/03		21.4	23.0	---	---	---	---	---	---
	02/19/04		21.4	26.6	---	---	---	---	---	---
	04/27/04		22.4	23.3	---	---	---	---	---	---
	06/15/04		22.7	22.2	---	---	---	---	---	---
	08/25/04		21.0	22.7	---	---	---	---	---	---
	10/14/04		22.0	22.6	---	---	---	---	---	---
	12/08/04		22.8	24.1	---	---	---	---	---	---
	02/11/05		22.0	26.5	---	---	---	---	---	---
	04/14/05		22.6	22.5	---	---	---	---	---	---
	06/06/05		22.5	24.3	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-14A	08/24/05		23.6	31.4	---	---	---	---	---	---
	10/13/05		23.2	23.2	---	---	---	---	---	---
	12/07/05		22.9	22.5	---	---	---	---	---	---
	02/15/06		22.1	23.9	---	---	---	---	---	---
	04/18/06		22.6	27.3	---	---	---	---	---	---
	06/13/06		22.5	21.8	---	---	---	---	---	---
	08/11/06		26.0	22.2	---	---	---	---	---	---
	08/11/06	FD	25.7	21.1	---	---	---	---	---	---
	10/20/06		35.0	33.3	---	---	---	---	---	---
	10/20/06	FD	35.1	30.6	---	---	---	---	---	---
	12/08/06		38.1	38.2	---	---	---	---	---	---
	12/08/06	FD	39.3	36.9	---	---	---	---	---	---
	02/16/07		28.0	25.7	---	---	---	---	---	---
	02/16/07	FD	27.8	26.6	---	---	---	---	---	---
	04/19/07		30.1	25.9	---	---	---	---	---	---
	04/19/07	FD	28.9	27.4	---	---	---	---	---	---
	06/21/07		31.4	26.7	---	---	---	---	---	---
	08/14/07		28.2	28.3	---	---	---	---	---	---
	08/14/07	FD	28.3	27.6	---	---	---	---	---	---
	10/17/07		29.2	25.0	---	---	---	---	---	---
	10/17/07	FD	29.4	25.0	---	---	---	---	---	---
	12/04/07		27.9	26.7	---	---	---	---	---	---
	12/04/07	FD	27.9	26.8	---	---	---	---	---	---
	02/15/08		26.4	22.9	---	---	---	---	---	---
	02/15/08	FD	26.4	23.2	---	---	---	---	---	---
	04/11/08		26.0	22.6	---	---	---	---	---	---
	06/13/08		24.9	25.8	18.9	1,020	---	---	---	---
	08/05/08		24.7	23.4	---	---	---	---	---	---
	02/09/09		27.6	24.9	---	---	---	---	---	---
	05/13/09		---	---	16.8	1,010	---	---	---	---
	08/11/09		25.2	23.8	16.0J	1,070	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-14A	02/11/10		59.3	55.2	---	1,060	---	---	---	---
	03/09/10		30.3	29.0	---	---	---	---	---	---
	08/20/10		55.2	49.0	---	1,050	---	---	---	---
	10/05/10		57.6	52.0	---	---	---	---	---	---
	01/28/11		45.9	44.2	---	1,070	---	---	---	---
	05/05/11		---	---	15.4	1,070	---	---	---	ND (0.02)
	07/29/11		30.6	26.4	---	990	---	---	---	---
	02/01/12		13.5	15.9	---	1,030	---	---	---	---
	02/01/12	FD	13.6	14.8	---	1,040	---	---	---	---
	04/13/12		11.6	11.6	8.02	1,020	---	---	---	---
	07/27/12		9.5	9.2	6.10	1,100	---	---	---	---
	11/07/12		8.5	7.9	5.00	---	---	---	---	---
	02/07/13		8.3	7.1	6.20	980	---	---	---	---
	05/01/13		8.0	---	7.20	---	---	---	---	---
	08/06/13		6.5	5.9	7.50	980	---	---	---	---
	08/06/13	FD	6.5	5.9	7.50	990	---	---	---	---
	11/08/13		5.5	---	6.30	---	---	---	---	---
	02/05/14		5.6	5.1	5.80	940	---	---	---	---
	05/07/14		5.1	4.7	4.60	970	38.9	11.8	24.0	---
08/06/14		4.5	4.4	3.30	960	---	---	---	---	
MW-16	02/24/94		---	320	---	---	---	---	---	---
	06/02/94		---	290	---	---	---	---	---	---
	08/09/94		---	350	---	---	---	---	---	---
	10/26/94		---	360	---	---	---	---	---	---
	02/08/95		---	400	---	---	---	---	---	---
	05/09/95		---	370	---	---	---	---	---	---
	08/16/95		---	380	---	---	---	---	---	---
	10/04/95		---	390	---	---	---	---	---	---
	02/26/96		---	370	---	---	---	---	---	---
	04/03/96		---	370	---	---	---	---	---	---
	04/03/96	FD	---	430	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-16	07/30/96		---	520	---	---	---	---	---	---
	10/01/96		---	670	---	---	---	---	---	---
	02/04/97		---	920	---	---	---	---	---	---
	04/08/97		---	880	---	---	---	---	---	---
	07/29/97		811	880	---	---	---	---	---	---
	10/07/97		---	930	---	---	---	---	---	---
	03/04/98		---	760	---	---	---	---	---	---
	05/19/98		---	720	---	---	---	---	---	---
	08/12/98		---	640	---	---	---	---	---	---
	11/19/98		---	600	---	---	---	---	---	---
	02/25/99		---	580	---	---	---	---	---	---
	05/25/99		---	530	---	---	---	---	---	---
	08/25/99		---	460	---	---	---	---	---	---
	11/12/99		---	400	---	---	---	---	---	---
	02/08/00		---	330	---	---	---	---	---	---
	05/03/00		---	290	---	---	---	---	---	---
	08/09/00		---	230	---	---	---	---	---	---
	11/07/00		---	200	---	---	---	---	---	---
	03/09/01		---	160	---	---	---	---	---	---
	05/24/01		163	160	---	---	---	---	---	---
	09/26/01		---	150	---	---	---	---	---	---
	12/05/01		---	140	---	---	---	---	---	---
	02/13/02		146	131	---	---	---	---	---	---
	05/22/02		142	154	---	---	---	---	---	---
	08/21/02		136	132	---	---	---	---	---	---
	11/12/02		128	139	---	---	---	---	---	---
	02/18/03		126	117	---	---	---	---	---	---
	08/14/03		100	111	---	---	---	---	---	---
	02/18/04		97.1	97.3	---	---	---	---	---	---
	08/30/04		86.4	81.0	---	---	---	---	---	---
	02/10/05		75.1	71.4	---	---	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-16	08/19/05		63.0	62.3	---	---	---	---	---	---
	02/20/06		60.3	58.8	---	---	---	---	---	---
	08/16/06		56.1	60.4	---	---	---	---	---	---
	02/21/07		51.9	54.2	---	---	---	---	---	---
	02/21/07	FD	59.5	59.0	---	---	---	---	---	---
	08/22/07		51.6	49.0	---	---	---	---	---	---
	02/15/08		46.6	43.7	---	---	---	---	---	---
	08/13/08		44.4	42.5	---	---	---	---	---	---
	03/31/09		39.3	36.9	10.0	1,350	---	---	---	---
	05/12/09		---	---	9.48	1,320	---	---	---	---
	08/12/09		40.4	37.1	11.3	1,330	---	---	---	---
	11/11/09		34.0	35.0	---	---	---	---	---	---
	02/10/10		37.5	32.7	---	1,350	---	---	---	---
	03/23/10		38.0	33.3	---	---	---	---	---	---
	05/20/10		42.0	40.8	9.60	---	---	---	---	---
	06/23/10		43.6	41.6	10.0	---	---	---	---	---
	08/16/10		44.8	38.2	7.20	1,200	---	---	---	---
	11/01/10		32.7	29.2	8.80	---	---	---	---	---
	11/01/10	FD	32.1	31.3	8.80	---	---	---	---	---
	01/31/11		36.1	34.5	9.40	1,400	---	---	---	---
	04/27/11		30.0	30.0	9.60	---	---	---	---	---
	07/26/11		17.0	17.0	4.70	1,000	---	---	---	---
	11/07/11		25.6	26.6	---	---	---	---	---	---
	11/07/11	FD	25.7	24.8	---	---	---	---	---	---
	01/19/12		21.0	21.0	2.00	---	---	---	---	---
	03/29/12		---	---	---	950	---	---	---	---
	05/02/12		26.0	25.0	4.20	---	---	---	---	---
	08/02/12		32.0	30.0	5.40	1,100J	---	---	---	---
10/16/12		21.0	21.0J	4.20	---	---	---	---	---	
01/16/13		35.0	34.0	6.80	1,300	---	---	---	---	
04/18/13		20.0	16.0	4.60	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-16	07/18/13		19.0	19.0	3.90	1,200	---	---	---	---
	10/03/13		13.0	---	---	---	---	---	---	---
	12/09/13		---	4.4	---	---	---	---	---	---
	01/14/14		2.8	2.7	---	1,100	---	---	---	---
	01/14/14	FD	2.7	2.7	---	1,100	---	---	---	---
	04/11/14		---	---	---	---	18.8S	---	---	---
	04/11/14		12.0	11.0	2.20	1,200	26.5	8.32	32.0	---
	07/21/14		9.8	8.7	---	1,200	---	---	---	---
MW-178D	07/01/13		68.0	---	---	---	---	---	---	---
	10/21/13		91.0	---	---	---	---	---	---	---
	01/13/14		170	---	---	---	---	---	---	---
	04/09/14		---	---	---	---	38.3JS	---	---	---
	04/09/14		290	---	14.0	1,000	70.6	12.4J	46.0	---
	07/15/14		290	---	---	---	---	---	---	---
MW-178S	07/01/13		270	---	---	---	---	---	---	---
	10/21/13		260	---	---	---	---	---	---	---
	10/21/13	FD	270	---	---	---	---	---	---	---
	01/13/14		250	---	---	---	---	---	---	---
	04/09/14		220	---	14.0	820	39.7	6.58J	26.0	---
	04/09/14		---	---	---	---	18.4JS	---	---	---
	07/15/14		220	---	---	---	---	---	---	---
MW-180RD	07/24/13		69.0	---	---	---	---	---	---	---
	10/21/13		94.0	---	---	---	---	---	---	---
	01/07/14		290	---	---	---	---	---	---	---
	04/10/14		100	---	3.70	540	17.9	4.86J	11.0	---
	07/18/14		95.0	---	---	---	---	---	---	---
	07/18/14	FD	95.0	---	---	---	---	---	---	---
MW-180RS	07/24/13		86.0	---	---	---	---	---	---	---
	10/21/13		94.0	---	---	---	---	---	---	---
	01/07/14		78.0	---	---	---	---	---	---	---
	04/10/14		99.0	---	5.60	700	17.0	6.74J	12.0	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-180RS	07/18/14		92.0	---	---	---	---	---	---	---
MW-21B	07/25/02		ND (0.2)	ND (1.0)	ND (0.10)	1,430	---	---	---	---
	07/25/02	FD	ND (0.2)	1.8	---	---	---	---	---	---
	08/21/02		ND (0.2)	1.7	---	---	---	---	---	---
	09/25/02		ND (0.2)	2.9	---	---	---	---	---	---
	10/15/02		ND (0.2)	1.4	---	---	---	---	---	---
	11/12/02		ND (0.2)	1.1	---	---	---	---	---	---
	12/17/02		ND (0.2)	1.0	---	---	---	---	---	---
	01/24/03		ND (0.2)	1.6	---	---	---	---	---	---
	02/20/03		ND (0.2)	2.5	ND (0.50)	1,180	---	---	---	---
	03/27/03		ND (0.2)	2.6	---	---	---	---	---	---
	04/17/03		ND (0.2)	1.2	---	---	---	---	---	---
	06/25/03		ND (0.2)	1.4	---	---	---	---	---	---
	08/19/03		ND (0.2)	1.4	---	---	---	---	---	---
	10/27/03		ND (0.2)	2.1	---	---	---	---	---	---
	12/02/03		ND (0.2)	5.1J	---	---	---	---	---	---
	02/16/04		ND (0.2)	3.2	---	---	---	---	---	---
	04/27/04		ND (0.2)	1.7	---	---	---	---	---	---
	07/13/04		---	---	8.60	1,970	---	---	---	ND (0.02)
	07/13/04		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/24/04		ND (0.2)	1.5	---	---	---	---	---	---
	10/11/04		ND (0.2)	ND (1.0)	10.1	2,140	---	---	---	---
	02/03/05		0.29	3.7	9.39J	2,440J	---	---	---	---
	04/13/05		ND (0.2)	ND (1.0)	2.74	1,290	---	---	---	---
	08/16/05		ND (0.2)	ND (1.0)	1.05	916	---	---	---	---
	10/11/05		ND (0.2)	ND (1.0)	1.98	1,070	---	---	---	---
	02/14/06		ND (0.2)	ND (1.0)	0.529	756	---	---	---	---
	04/17/06		ND (0.2)	2.7	ND (0.20)	633	---	---	---	---
	04/17/06	FD	ND (0.2)	3.0	ND (0.20)	632	---	---	---	---
	08/14/06		0.22	ND (1.0)	9.67	1,860	---	---	---	---
	12/04/06		ND (0.2)	ND (1.0)	0.977	1,120	---	---	---	---

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-21B	12/04/06	FD	ND (0.2)	ND (1.0)	0.984	996	---	---	---	---
	02/13/07		ND (0.2)	ND (1.0)	0.229	708	---	---	---	---
	04/19/07		ND (0.2)	ND (1.0)	ND (0.20)	668	---	---	---	---
	04/19/07	FD	ND (0.2)	ND (1.0)	ND (0.20)	649	---	---	---	---
	08/15/07		ND (0.2)	ND (1.0)	ND (1.00)	582	---	---	---	---
	12/06/07		ND (0.2)	ND (1.0)	ND (1.00)	555	---	---	---	---
	02/13/08		ND (0.2)	ND (1.0)	0.388	568	---	---	---	---
	04/10/08		ND (0.2)	ND (1.0)	ND (1.00)	556	---	---	---	---
	08/07/08		ND (0.2)	ND (1.0)	ND (1.00)	569	---	---	---	---
	10/10/08		---	---	0.679	580	---	---	---	---
	11/05/08		ND (0.2)	ND (1.0)	ND (1.00)	545	---	---	---	---
	02/04/09		ND (0.2)	ND (1.0)	ND (0.50)	569	---	---	---	---
	05/14/09		ND (0.2)	ND (1.0)	ND (1.00)	1,180	---	---	---	---
	08/10/09		ND (0.2)	ND (1.0)	ND (5.00)	545	---	---	---	---
	11/10/09		ND (0.2)	ND (1.0)	1.08	568	---	---	---	---
	02/09/10		ND (0.2)	ND (1.0)	1.11	573	---	---	---	---
	05/12/10		ND (0.2)	ND (1.0)	2.26	595	---	---	---	---
	08/19/10		ND (0.2)	ND (1.0)	1.61	610	---	---	---	---
	10/27/10		ND (0.2)	ND (1.0)	1.59	600	---	---	---	---
	01/26/11		ND (0.2)	ND (1.0)	2.26	614	---	---	---	---
	05/05/11		ND (0.2)	ND (1.0)	2.27	664	---	---	---	---
	05/05/11	FD	ND (0.2)	ND (1.0)	2.02	606	---	---	---	---
	05/09/11		---	---	---	---	---	---	---	0.0395
	07/28/11		ND (0.2)	ND (1.0)	2.29J	632	---	---	---	---
	11/02/11		ND (0.061)	ND (1.0)	4.53	666	---	---	---	---
	01/16/12		---	---	2.66	702	---	---	---	---
	01/16/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
04/05/12		ND (0.06)	ND (1.0)	4.00	680	---	---	---	---	
07/12/12		ND (0.06)	ND (1.0)	4.60	780	---	---	---	---	
10/10/12		ND (0.06)	ND (1.0)	4.40	820	---	---	---	---	
01/29/13		ND (0.06)	ND (1.0)	ND (0.05)	650	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-21B	04/10/13		ND (0.06)	ND (1.0)	ND (0.05)	620	---	---	---	---
	07/12/13		ND (0.06)	ND (1.0)	ND (0.05)	840	---	---	---	---
	10/01/13		ND (0.06)	ND (1.0)	ND (0.05)	650	---	---	---	---
	10/01/13	FD	ND (0.06)	ND (1.0)	ND (0.05)	630	---	---	---	---
	03/07/14		ND (0.06)	ND (1.0)	ND (0.05)	630	---	---	---	---
	04/14/14		ND (0.069)	ND (1.0)	---	---	14.3	9.64	8.90	---
	07/17/14		ND (0.06)	ND (1.0)	---	---	---	---	---	ND (0.10)
MW-24B	12/30/02		5.7	15.0	---	---	---	---	---	---
	02/25/03		6.3	9.1	---	---	---	---	---	---
	06/24/03		4.5	7.5	---	---	---	---	---	---
	08/13/03		3.9	5.3	---	---	---	---	---	---
	10/30/03		3.9	10.2	---	---	---	---	---	---
	12/01/03		4.7	14.6J	---	---	---	---	---	---
	02/16/04		7.3	10.3	---	---	---	---	---	---
	04/28/04		7.5	8.8	---	---	---	---	---	---
	06/14/04		7.7	8.5	---	---	---	---	---	---
	08/24/04		10.3	12.7	---	---	---	---	---	---
	10/14/04		10.8	11.8	---	---	---	---	---	---
	12/07/04		10.6	12.4	---	---	---	---	---	---
	02/07/05		14.5	15.2	---	---	---	---	---	---
	05/04/05		14.2	13.2	---	---	---	---	---	---
	06/06/05		15.9	18.2	---	---	---	---	---	---
	08/18/05		10.6	10.6	---	---	---	---	---	---
	10/12/05		13.8	18.6	---	---	---	---	---	---
	12/06/05		14.7	14.9	---	---	---	---	---	---
	02/15/06		9.9	12.4	---	---	---	---	---	---
	08/09/06		---	5.6	---	---	---	---	---	---
02/13/07		4.6	4.0	---	---	---	---	---	---	
08/15/07		7.6	6.8	---	---	---	---	---	---	
02/12/08		8.3	7.8	---	---	---	---	---	---	
08/06/08		8.4	7.7	---	---	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-24B	08/05/09		7.2	6.6	---	---	---	---	---	---
	08/03/10		6.1	6.0	---	---	---	---	---	---
	05/04/11		---	---	13.5	1,100	---	---	---	ND (0.02)
	07/29/11		5.2	5.4	---	---	---	---	---	---
	12/12/11		5.6	5.2	14.9	970	---	---	---	---
	01/30/12		4.9	5.2	15.1	1,070	---	---	---	---
	04/25/12		5.3	5.3	15.8	1,050	---	---	---	---
	07/26/12		5.3	5.6	16.4	1,020	---	---	---	---
	10/11/12		5.8	6.4	---	1,020	---	---	---	---
	11/19/12		---	---	15.9	---	---	---	---	---
	01/17/13		5.8	5.9	16.2	1,040	---	---	---	---
	04/08/13		5.3	5.3	17.6	1,070	---	---	---	---
	07/12/13		5.2	5.5	16.6	1,020	---	---	---	---
	10/14/13		5.6	5.2	16.8	1,080	---	---	---	---
	10/14/13	FD	5.6	5.2	16.8	1,080	---	---	---	---
	01/14/14		5.5	6.3	17.2	1,100	---	---	---	---
	04/11/14		---	---	---	---	47.7	20.8	35.0	---
04/11/14		---	---	---	---	29.8S	---	---	---	
07/25/14		6.2	6.6	---	---	---	---	---	---	
MW-30B1	06/20/03		93.5	88.0	---	---	---	---	---	---
	10/13/03		96.8	88.9	---	---	---	---	---	---
	07/14/04		---	---	9.87	944	---	---	---	ND (0.02)
	07/14/04		86.9	86.6	---	---	---	---	---	---
	08/30/04		80.0	68.4	---	---	---	---	---	---
	10/13/04		66.6	59.1	11.0	916	---	---	---	---
	02/03/05		50.0	49.8	10.6	747J	---	---	---	---
	04/12/05		45.0	43.2	11.2	979	---	---	---	---
	08/16/05		6.0	7.4	11.7	1,020	---	---	---	---
	10/11/05		ND (10.0)	4.4	12.3	1,020	---	---	---	---
	02/14/06		5.6	8.7	13.2	1,020	---	---	---	---
04/18/06		5.0	8.9	12.5	990	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-30B1	08/14/06		5.4	5.1	12.6	1,030	---	---	---	---
	12/04/06		6.8	5.9	12.8	1,250	---	---	---	---
	02/14/07		6.9	6.7	12.3	1,020	---	---	---	---
	04/09/07		4.6	5.6	11.7	1,070	---	---	---	---
	08/15/07		4.7	5.1	14.1	1,050	---	---	---	---
	10/16/07		5.2	4.8	---	---	---	---	---	---
	12/07/07		5.5	5.6	13.0	1,080	---	---	---	---
	02/13/08		5.3	5.5	12.6	1,030	---	---	---	---
	04/09/08		5.2	5.6	12.5	1,080	---	---	---	---
	08/07/08		4.7	4.5	11.9	994	---	---	---	---
	10/08/08		---	---	10.9	1,000	---	---	---	---
	11/05/08		4.9	4.3	11.3	1,010	---	---	---	---
	02/04/09		5.0	5.1	12.4	984	---	---	---	---
	05/14/09		4.3	4.5	12.3	1,060	---	---	---	---
	08/10/09		4.5	4.6	10.0	980	---	---	---	---
	11/10/09		4.7	4.5	12.2	1,060	---	---	---	---
	02/10/10		4.1	4.3	11.0	1,090	---	---	---	---
	05/12/10		4.2	3.6	12.8	1,060	---	---	---	---
	08/19/10		5.1	5.2	12.7	1,050	---	---	---	---
	10/27/10		4.5	6.8	5.78	1,010	---	---	---	---
	01/26/11		4.1	4.3	11.8	1,030	---	---	---	---
	05/05/11		4.6	4.9	15.6	1,070	---	---	---	---
	05/09/11		---	---	---	---	---	---	---	ND (0.02)
	07/28/11		7.4	7.7	14.8J	1,090	---	---	---	---
	09/12/11		7.2	7.6	18.4J	1,070	---	---	---	---
	09/12/11	FD	7.1	6.9	12.5J	1,070	---	---	---	---
	11/01/11		5.9	6.4	14.6	1,050	---	---	---	---
	01/12/12		6.2	7.0	12.9	1,010	---	---	---	---
	01/12/12	FD	6.3	7.0	12.8	1,030	---	---	---	---
	04/09/12		5.4	5.6	15.8	1,340	---	---	---	---
	07/23/12		3.9	4.2	16.2	1,270	---	---	---	---

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-30B1	10/17/12		4.2	4.1	14.6	1,120	---	---	---	---
	01/22/13		4.2	4.1	16.3	1,330	---	---	---	---
	04/15/13		4.0	4.2	16.5	1,650	---	---	---	---
	07/30/13		4.9	5.5	15.8	1,620	---	---	---	---
	10/15/13		4.6	5.2	16.2	1,170	---	---	---	---
	01/21/14		3.6	3.8	16.2	1,060	---	---	---	---
	04/14/14		3.3	3.2	---	---	75.8	20.3	56.0	---
	04/14/14		---	---	---	---	40.3S	---	---	---
	04/14/14	FD	3.3	3.7	---	---	76.0	20.0	51.0	---
	04/14/14	FD	---	---	---	---	41.8S	---	---	---
MW-30B2	07/17/14		3.0	3.5	---	---	---	---	---	---
	07/14/03		162	155	---	---	---	---	---	---
	07/14/03	FD	163	165	---	---	---	---	---	---
	10/29/03		34.0	37.2	---	---	---	---	---	---
	10/29/03	FD	33.2	35.6	---	---	---	---	---	---
	12/02/03		79.0	72.7J	---	---	---	---	---	---
	01/27/04		54.0	47.1	---	---	---	---	---	---
	01/27/04		---	---	7.92	851	---	---	---	ND (0.02)
	02/20/04		54.7	50.0	---	---	---	---	---	---
	04/27/04		46.6	43.1	---	---	---	---	---	---
	04/27/04	FD	46.2	41.9	---	---	---	---	---	---
	06/14/04		56.6	50.8	---	---	---	---	---	---
	06/14/04	FD	58.3	55.5	---	---	---	---	---	---
	07/13/04		63.3	76.1	---	---	---	---	---	---
	07/13/04		---	---	6.97	822	---	---	---	ND (0.02)
	08/24/04		131	177	---	---	---	---	---	---
10/11/04		174	180	7.56	808	---	---	---	---	
10/11/04	FD	192	174	7.54	822	---	---	---	---	
12/06/04		182	168	---	---	---	---	---	---	
12/06/04	FD	170	169	---	---	---	---	---	---	
02/03/05		89.4	82.5	9.02	1,010J	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-30B2	04/12/05		39.7	39.2	9.91	997	---	---	---	---
	06/07/05		49.1	50.2	---	---	---	---	---	---
	08/16/05		22.5	21.8	11.0	956	---	---	---	---
	10/11/05		ND (10.0)	5.7	11.4	1,020	---	---	---	---
	12/08/05		32.1	29.6	---	---	---	---	---	---
	02/14/06		11.2	14.4	12.8	1,080	---	---	---	---
	04/18/06		10.4	33.6	11.3	1,000	---	---	---	---
	06/12/06		20.7	27.0	---	---	---	---	---	---
	08/14/06		34.2	29.9	10.8	1,030	---	---	---	---
	10/18/06		20.4	21.4	---	---	---	---	---	---
	12/04/06		13.3	11.6	11.7	1,140	---	---	---	---
	02/14/07		25.2	27.0	11.5	812	---	---	---	---
	04/19/07		8.1	8.9	11.6	1,030	---	---	---	---
	06/20/07		10.9	10.2	---	---	---	---	---	---
	08/15/07		13.5	13.8	12.7	1,010	---	---	---	---
	10/16/07		19.4	18.3	---	---	---	---	---	---
	12/07/07		12.8	10.4	11.8	1,070	---	---	---	---
	02/13/08		7.4	7.2	12.2	1,070	---	---	---	---
	04/09/08		8.8	9.4	11.3	1,070	---	---	---	---
	06/10/08		12.6	10.3	11.0	1,010	---	---	---	---
	08/07/08		9.4	9.2	11.6	956	---	---	---	---
	10/10/08		---	---	11.1	1,000	---	---	---	---
	11/05/08		7.4	6.4	12.2	1,050	---	---	---	---
	02/04/09		20.4	20.0	11.2	960	---	---	---	---
	03/05/09		7.8	6.7	---	---	---	---	---	---
	05/14/09		6.8	6.4	12.0	1,050	---	---	---	---
	08/10/09		7.0	7.1	10.0	1,010	---	---	---	---
08/10/09	FD	7.2	6.4	10.0	1,020	---	---	---	---	
11/10/09		7.0	6.6	11.6	1,040	---	---	---	---	
02/10/10		6.0	5.8	11.2	1,030	---	---	---	---	
05/12/10		6.2	5.7	11.9	1,040	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-30B2	05/12/10	FD	5.6	5.3	---	---	---	---	---	---
	08/19/10		5.9	5.3	12.8J	1,080	---	---	---	---
	08/19/10	FD	6.0	5.6	12.5	1,060	---	---	---	---
	10/27/10		6.4	6.7	11.8	1,060	---	---	---	---
	10/27/10	FD	6.6	6.5	11.9	1,050	---	---	---	---
	01/26/11		7.3	7.2	12.9	1,030	---	---	---	---
	01/26/11	FD	7.7	7.4	12.2	1,070	---	---	---	---
	05/05/11		5.4	6.4	12.3	1,070	---	---	---	---
	05/09/11		---	---	---	---	---	---	---	ND (0.02)
	07/28/11		4.8	5.2	12.9	1,070	---	---	---	---
	11/01/11		4.4	5.1	12.4	1,010	---	---	---	---
	01/12/12		5.3	5.5	12.8	984	---	---	---	---
	04/09/12		4.8	5.0	12.5	974	---	---	---	---
	07/23/12		9.5	9.9	13.2	1,020	---	---	---	---
	10/17/12		4.5	4.6	14.5	1,090	---	---	---	---
	01/22/13		4.4	4.1	15.5	1,070	---	---	---	---
	04/15/13		4.6	4.6	15.1	1,060	---	---	---	---
	07/30/13		5.6	5.9	15.7	1,030	---	---	---	---
	10/15/13		10.2	11.1	13.8	1,110	---	---	---	---
	01/21/14		10.3	9.8	15.8	1,020	---	---	---	---
04/14/14		11.0	11.0	---	---	53.4	11.7	55.0	---	
07/17/14		12.0	13.0	---	---	---	---	---	---	
MW-32B2	07/15/03		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/05/03		0.2	1.7	---	---	---	---	---	---
	08/24/04		ND (0.2)	1.2	---	---	---	---	---	---
	10/13/04		ND (0.2)	ND (1.0)	ND (0.20)	334	---	---	---	---
	02/03/05		ND (0.2)	ND (1.0)	ND (0.20)	395J	---	---	---	---
	04/13/05		ND (0.2)	ND (1.0)	ND (0.20)	379	---	---	---	---
	08/16/05		ND (0.2)	ND (1.0)	ND (0.20)	340	---	---	---	---
	10/12/05		ND (0.2)	1.4	ND (0.20)	343	---	---	---	---
02/14/06		ND (0.2)	ND (1.0)	ND (0.20)	338	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-32B2	04/18/06		ND (0.2)	1.8	ND (0.20)	323	---	---	---	---
	08/15/06		ND (0.2)	ND (1.0)	ND (0.20)	342	---	---	---	---
	12/06/06		ND (0.2)	ND (1.0)	ND (0.20)	259	---	---	---	---
	02/15/07		ND (0.2)	ND (1.0)	ND (0.20)	330	---	---	---	---
	04/10/07		ND (0.2)	ND (1.0)	ND (0.20)	381	---	---	---	---
	08/22/07		ND (0.2)	1.7	ND (0.20)	309	---	---	---	---
	12/10/07		ND (0.2)	1.2	ND (1.00)	401	---	---	---	---
	02/13/08		ND (0.2)	ND (1.0)	ND (0.20)	368	---	---	---	---
	04/09/08		ND (0.2)	ND (1.0)	ND (0.20)	374	---	---	---	---
	08/07/08		ND (0.2)	ND (1.0)	ND (1.00)	358	---	---	---	---
	10/09/08		---	---	0.566	420	---	---	---	---
	11/06/08		ND (0.2)	ND (1.0)	ND (1.00)	382	---	---	---	---
	02/05/09		ND (0.2)	ND (1.0)	ND (1.00)	397	---	---	---	---
	05/14/09		ND (0.2)	ND (1.0)	ND (1.00)	389	---	---	---	---
	08/10/09		ND (0.2)	ND (1.0)	ND (5.00)	380	---	---	---	---
	11/10/09		ND (0.2)	ND (1.0)	ND (1.00)	373	---	---	---	---
	02/10/10		ND (0.2)	ND (1.0)	ND (1.00)	399	---	---	---	---
	05/12/10		ND (0.2)	ND (1.0)	ND (1.00)	387	---	---	---	---
	08/19/10		ND (0.2)	ND (1.0)	ND (1.00)	359	---	---	---	---
	10/27/10		ND (0.2)	ND (1.0)	ND (0.50)	367	---	---	---	---
	01/26/11		ND (0.2)	ND (1.0)	ND (0.50)	377	---	---	---	ND (0.02)
	05/02/11		ND (0.2)	ND (1.0)	ND (0.50)	377	---	---	---	---
	05/02/11	FD	ND (0.2)	ND (1.0)	ND (0.50)	420	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	ND (0.02)
	08/01/11		1.1	1.2	ND (0.50)	422	---	---	---	---
	08/01/11	FD	1.0	1.3	ND (0.50)	397	---	---	---	---
	11/01/11		2.4	2.9	1.06	444	---	---	---	---
01/16/12		2.7	2.7	---	---	---	---	---	---	
01/16/12		---	---	2.95	526	---	---	---	---	
04/09/12		3.3	3.7	2.28	524	---	---	---	---	
04/09/12	FD	3.3	3.6	2.25	516	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-32B2	07/24/12		3.2	3.2	3.68	588	---	---	---	---
	10/17/12		4.3	4.5	5.16	680	---	---	---	---
	01/24/13		5.2	5.9	5.60	688	---	---	---	---
	04/15/13		5.7	5.8	6.50	722	---	---	---	---
	07/31/13		5.7	5.9	6.54	744	---	---	---	---
	10/15/13		5.9	5.6	7.54	808	---	---	---	---
	10/15/13	FD	5.9	5.3	7.02	810	---	---	---	---
	01/21/14		4.7	4.8	6.85	711	---	---	---	---
	04/16/14		6.6	6.5	---	---	39.6	8.92J	28.0	---
	07/23/14		7.0	7.4	---	---	---	---	---	---
MW-36	08/06/03		93.7	94.1	1.38	364	---	---	---	---
	10/14/03		147	142	---	---	---	---	---	---
	10/14/03	FD	148	150	---	---	---	---	---	---
	02/19/04		89.1	83.4	---	---	---	---	---	---
	04/27/04		119	105	---	---	---	---	---	---
	06/15/04		117J	111	---	---	---	---	---	---
	08/25/04		112	136	---	---	---	---	---	---
	02/11/05		94.4	97.0	---	---	---	---	---	---
	08/18/05		112	147	---	---	---	---	---	---
	02/17/06		150	154	---	---	---	---	---	---
	08/08/06		181	174	---	---	---	---	---	---
	10/24/06		295	260	1.66	450	---	---	---	---
	02/21/07		276	235	---	---	---	---	---	---
	08/15/07		84.6	82.4	---	---	---	---	---	---
	02/18/08		152	140	---	---	---	---	---	---
	08/12/08		108	118	---	---	---	---	---	---
	02/06/09		99.2	111	---	---	---	---	---	---
	05/13/09		---	---	1.27	404	---	---	---	---
	08/11/09		83.8	77.9	1.30J	387	---	---	---	---
	02/11/10		64.1	57.8	---	412	---	---	---	---
08/20/10		64.7	58.1	---	401	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-36	01/28/11		89.6	78.2	---	482	---	---	---	---
	08/04/11		330	317	---	489	---	---	---	---
	11/02/11		386	376	---	---	---	---	---	---
	01/31/12		73.1	79.3	---	496	---	---	---	---
	04/17/12		216	218	---	---	---	---	---	---
	07/19/12		62.8	60.9	---	499	---	---	---	---
	10/10/12		55.6	52.4	2.01	---	---	---	---	---
	01/22/13		39.5	36.8	---	540	---	---	---	---
	04/19/13		140	150	---	---	---	---	---	---
	07/19/13		310	300	---	480	---	---	---	---
	10/07/13		130	120	---	---	---	---	---	---
	01/13/14		130	110	---	510	---	---	---	---
	04/03/14		29.0	29.0	1.90	530	13.4	ND (4.00)	9.20	---
07/14/14		84.0	87.0	---	510	---	---	---	---	
MW-43	04/08/04		1.6	2.9	---	---	---	---	---	---
	04/29/04		1.6	3.4	---	---	---	---	---	---
	07/14/04		1.6	2.6	---	---	---	---	---	---
	07/14/04		---	---	22.2	4,410	---	---	---	ND (0.02)
	08/27/04		2.2	4.5	---	---	---	---	---	---
	02/04/05		8.1	9.1	---	---	---	---	---	---
	05/04/05		9.9	10.9	---	---	---	---	---	---
	08/17/05		9.8	10.9	19.5	3,160	---	---	---	---
	10/12/05		5.1	7.8	20.0	3,760	---	---	---	---
	12/09/05		7.7	8.3	---	---	---	---	---	---
	02/14/06		6.8	8.7	20.2	3,060	---	---	---	---
	04/19/06		16.4	19.9	16.6	2,720	---	---	---	---
	08/14/06		28.4	23.8	18.3	2,250	---	---	---	---
	10/18/06		26.1	23.0	---	---	---	---	---	---
	12/07/06		27.1	23.6	21.2	2,530	---	---	---	---
02/15/07		28.1	26.9	19.2	2,230	---	---	---	---	
04/12/07		27.9	29.1	18.9	2,210	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-43	06/18/07		28.4	25.7	---	---	---	---	---	---
	08/16/07		24.4	23.4	18.0	2,320	---	---	---	---
	08/16/07	FD	24.3	26.5	19.3	2,340	---	---	---	---
	10/16/07		27.8	23.5	---	---	---	---	---	---
	12/10/07		23.1	21.9	18.0	2,470	---	---	---	---
	12/10/07	FD	22.9	22.3	19.3	2,440	---	---	---	---
	02/13/08		20.2	19.5	17.3	2,240	---	---	---	---
	04/09/08		17.2	16.8	15.3	1,950	---	---	---	---
	06/10/08		17.8	16.3	15.5	1,990	---	---	---	---
	08/12/08		14.0	16.1	15.6	1,900	---	---	---	---
	11/05/08		17.2	16.3	15.6	2,060	---	---	---	---
	02/04/09		8.9	8.2	12.7	1,320	---	---	---	---
	05/14/09		7.3	8.0	12.8	1,390	---	---	---	---
	08/10/09		8.7	9.0	12.0	1,450	---	---	---	---
	11/10/09		8.6	8.0	13.1	1,480	---	---	---	---
	02/09/10		5.0	6.1	12.6	1,170	---	---	---	---
	05/12/10		10.1	11.1	13.7	1,470	---	---	---	---
	08/19/10		14.2	13.5	16.9	2,190	---	---	---	---
	10/27/10		12.8	12.7	17.0	2,400	---	---	---	---
	01/26/11		6.4	6.3	12.2	1,290	---	---	---	---
	05/06/11		6.2	6.6	11.6	1,270	---	---	---	---
	08/08/11		18.4	16.8	16.6	1,750	---	---	---	---
	11/01/11		20.4	19.2	18.6	1,860	---	---	---	---
	01/13/12		17.3	18.7	20.1	2,060	---	---	---	---
	01/13/12	FD	17.4	19.6	20.0	2,080	---	---	---	---
	04/09/12		18.8	17.7	20.2	2,020	---	---	---	---
	07/24/12		15.4	14.3	19.0	2,260	---	---	---	---
	10/17/12		15.0	15.0	16.7	2,420	---	---	---	---
	01/24/13		7.0	7.8	19.4	2,940	---	---	---	---
	04/15/13		15.5	15.5	18.9	2,310	---	---	---	---
	07/31/13		9.1	9.8	21.9	3,100	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-43	10/14/13		14.1	12.9	15.7	2,590	---	---	---	---
	01/24/14		13.3	12.9	18.3	2,450	---	---	---	---
	04/14/14		---	---	---	---	59.5S	---	---	---
	04/14/14		9.0	8.6	---	---	119	23.2	14.0	---
	07/17/14		10.0	11.0	---	---	---	---	---	ND (0.50)
MW-50B	04/08/04		3.6	4.1	---	---	---	---	---	---
	04/08/04	FD	3.6	3.8	---	---	---	---	---	---
	04/28/04		3.4	4.3	---	---	---	---	---	---
	09/01/04		3.1	6.4	---	---	---	---	---	---
	10/13/04		3.2	3.6	5.09	694	---	---	---	---
	02/03/05		3.3	3.9	4.82	792J	---	---	---	---
	04/13/05		3.4	4.2	4.90	775	---	---	---	---
	08/16/05		3.3	3.7	4.75	745	---	---	---	---
	10/12/05		3.4	4.3	4.82	720	---	---	---	---
	02/14/06		3.3	4.3	5.08	713	---	---	---	---
	04/18/06		3.2	6.2	5.00	669	---	---	---	---
	08/15/06		3.2	3.1	5.02	708	---	---	---	---
	12/04/06		3.3	2.7	5.10	850	---	---	---	---
	02/15/07		3.0	2.9	4.91	654	---	---	---	---
	04/10/07		3.1	3.3	5.06	759	---	---	---	---
	08/16/07		3.0	3.1	5.29	766	---	---	---	---
	12/10/07		2.9	3.2	5.12	754	---	---	---	---
	02/14/08		3.0	3.1	5.26	770	---	---	---	---
	04/10/08		3.0	3.2	5.26	920	---	---	---	---
	08/13/08		2.8	2.9	5.20	794	---	---	---	---
	11/05/08		2.8	2.4	5.30	652	---	---	---	---
02/04/09		2.7	2.7	5.40	639	---	---	---	---	
05/14/09		2.7	3.0	5.62J	752	---	---	---	---	
05/14/09	FD	2.7	2.6	1.18J	786	---	---	---	---	
08/11/09		2.7	3.3	5.50J	747	---	---	---	---	
11/11/09		2.6	2.5	5.56	726	---	---	---	---	

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-50B	02/09/10		2.4	2.5	3.88	621	---	---	---	---
	05/12/10		2.7	2.8	5.77	742	---	---	---	---
	08/19/10		3.0	2.8	6.08	708	---	---	---	---
	10/27/10		2.6	2.8	5.59	692	---	---	---	---
	01/25/11		2.6	2.5	6.64	720J	---	---	---	---
	05/03/11		2.7	3.6	6.40	712	---	---	---	---
	05/03/11	FD	2.7	3.4	6.06	716	---	---	---	---
	06/01/11		2.7	2.8	---	---	---	---	---	---
	08/08/11		2.6	2.7	5.55	692	---	---	---	---
	08/08/11	FD	2.7	2.6	5.94	704	---	---	---	---
	11/01/11		2.4	2.6	5.96	675	---	---	---	---
	01/13/12		2.7	3.4	16.2	682	---	---	---	---
	04/10/12		2.6	2.8	6.39	658	---	---	---	---
	07/24/12		2.5	2.7	5.77	682	---	---	---	---
	10/09/12		2.5	2.6	5.20	690	---	---	---	---
	01/29/13		2.4	2.4	5.40	690	---	---	---	---
	04/10/13		2.3	2.5	5.89	684	---	---	---	---
	07/31/13		2.3	2.5	6.24	740	---	---	---	---
	10/14/13		2.4	2.4	6.53	792	---	---	---	---
	01/24/14		2.4	2.4	7.66	744	---	---	---	---
04/16/14		2.6	2.6	---	---	33.6	10.9J	32.0	---	
04/16/14	FD	2.6	2.6	---	---	36.9	10.7J	31.0	---	
07/23/14		2.6	2.7	---	---	---	---	---	---	
MW-50S	11/16/10		13.5	13.5	18.4	1,220	---	---	---	---
	01/13/11		14.3	15.1	---	---	---	---	---	---
	05/03/11		13.7	14.9	---	---	---	---	---	---
	08/08/11		14.2	13.1	---	---	---	---	---	---
	11/01/11		13.6	12.4	---	---	---	---	---	---
	12/05/11		---	---	19.7	1,210	---	---	---	---
	02/03/12		13.5	13.5	19.0	1,230	---	---	---	---
	04/24/12		13.3	13.4	19.8	1,200	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-50S	07/17/12		12.3	12.1	19.1	1,230	---	---	---	---
	10/03/12		13.1	13.8	19.1	1,240	---	---	---	---
	10/03/12	FD	13.2	14.2	19.2	1,240	---	---	---	---
	01/17/13		12.7	12.8	18.3	1,190	---	---	---	---
	04/16/13		12.5	13.0	19.2	1,200	---	---	---	---
	07/10/13		12.3	13.8	20.0	1,250	---	---	---	---
	10/14/13		11.9	11.7	19.9	1,240	---	---	---	---
	01/15/14		12.0	13.9	20.0	1,210	---	---	---	---
	04/16/14		13.0	13.0	---	---	30.1	8.51J	29.0	---
	07/23/14		14.0	14.0	---	---	---	---	---	---
MW-55B	10/13/04		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	12/08/04		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/07/05		ND (0.2)	2.3	---	---	---	---	---	---
	08/19/05		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/16/06		ND (0.2)	1.1	---	---	---	---	---	---
	08/15/06		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/15/06	FD	0.21	ND (1.0)	---	---	---	---	---	---
	02/20/07		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/20/07	FD	ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/14/07		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/14/08		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/07/08		0.22	ND (1.0)	---	---	---	---	---	---
	10/08/08		---	---	ND (0.113)	350	---	---	---	---
	10/08/08	FD	---	---	ND (0.113)	350	---	---	---	---
	08/05/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/13/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/03/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
08/25/10		---	---	ND (0.10)	361	---	---	---	---	
10/27/10		ND (0.2)	ND (1.0)	ND (0.50)	356	---	---	---	---	
01/25/11		ND (0.2)	ND (1.0)	ND (1.00)	375J	---	---	---	0.0794	
05/05/11		ND (0.2)	ND (1.0)	ND (0.50)	404	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-55B	08/02/11		ND (0.2)	ND (1.0)	ND (0.50)	351	---	---	---	---
	11/01/11		ND (0.11)	ND (1.0)	5.88	334	---	---	---	---
	01/16/12		0.094	ND (1.0)	---	---	---	---	---	---
	01/16/12		---	---	ND (0.50)	356	---	---	---	---
	01/16/12	FD	ND (0.06)	ND (1.0)	ND (0.50)	383	---	---	---	---
	04/06/12		0.095	ND (1.0)	ND (0.05)	380	---	---	---	---
	07/12/12		0.11	ND (1.0)	ND (0.05)	400	---	---	---	---
	07/12/12	FD	0.11	ND (1.0)	ND (0.05)	380	---	---	---	---
	10/09/12		0.089	ND (1.0)	ND (0.05)	360	---	---	---	---
	01/17/13		ND (0.2)	ND (1.0)	ND (0.05)	370	---	---	---	---
	04/10/13		0.34	ND (1.0)	ND (0.05)	360	---	---	---	---
	07/31/13		ND (0.06)	ND (1.0)	ND (0.50)	367	---	---	---	---
	10/14/13		ND (0.06)	ND (1.0)	ND (0.50)	394	---	---	---	---
	01/22/14		ND (0.06)	ND (1.0)	ND (0.50)	362	---	---	---	---
	04/16/14		0.093	ND (1.0)	---	---	ND (3.00)	ND (4.00)	ND (0.67)	---
	07/23/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	07/23/14	FD	ND (0.06)	ND (1.0)	---	---	---	---	---	---
MW-62A	09/05/06		1.4	1.2	---	---	---	---	---	---
	12/13/06		1.7	1.5	18.8	4,460	---	---	---	---
	02/20/07		1.7	2.1	---	---	---	---	---	---
	04/11/07		1.5	3.0	---	---	---	---	---	---
	04/11/07	FD	1.5	3.0	---	---	---	---	---	---
	06/20/07		1.8J	1.8	---	---	---	---	---	---
	08/15/07		2.0	2.1	---	---	---	---	---	---
	10/16/07		2.6	2.7	---	---	---	---	---	---
	12/07/07		2.6	3.2	---	---	---	---	---	---
	02/12/08		2.1	2.4	---	---	---	---	---	---
	04/08/08		2.2	2.6	---	---	---	---	---	---
	06/10/08		1.1	1.2	6.00	1,770	---	---	---	---
	08/05/08		3.9	3.8	---	---	---	---	---	---
10/07/08		---	---	16.5	3,200	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-62A	11/07/08		5.9	6.4	---	---	---	---	---	---
	02/12/09		7.1	7.2	---	---	---	---	---	---
	02/12/09	FD	7.0	7.2	---	---	---	---	---	---
	03/06/09		7.6	6.7	---	---	---	---	---	---
	05/14/09		5.9	6.7	---	---	---	---	---	---
	08/07/09		4.8	5.4	---	---	---	---	---	---
	11/17/09		10.5	13.2	---	---	---	---	---	---
	11/17/09	FD	10.5	13.1	---	---	---	---	---	---
	02/16/10		14.7	14.8	---	---	---	---	---	---
	05/13/10		13.2	13.7	---	---	---	---	---	---
	08/02/10		2.8	2.6	---	---	---	---	---	---
	08/24/10		---	---	12.0J	2,470	---	---	---	---
	10/28/10		19.7	17.1	18.3	2,780	---	---	---	---
	01/26/11		18.5	17.3	23.6	3,020	---	---	---	ND (0.02)
	05/05/11		20.1	20.9	19.2	2,850	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	ND (0.02)
	05/10/11	FD	---	---	---	---	---	---	---	ND (0.02)
	08/02/11		14.6	16.7	16.3	2,560	---	---	---	---
	11/01/11		9.1	9.5	16.0	2,900	---	---	---	---
	11/01/11	FD	9.0	9.3	15.4	2,810	---	---	---	---
	01/16/12		3.1	4.4	8.17	1,980	---	---	---	---
	04/09/12		5.0	5.4	16.0	2,670	---	---	---	---
	07/24/12		2.9	2.9	17.6	3,120	---	---	---	---
	10/17/12		2.8	2.7	16.5	3,420	---	---	---	---
	01/24/13		2.0	2.1	14.3J	2,410	---	---	---	---
	04/09/13		2.0	2.2	19.0	3,150	---	---	---	---
	07/31/13		2.0	2.9	21.7	3,180	---	---	---	---
	07/31/13	FD	2.0	2.9	21.5	3,200	---	---	---	---
	10/15/13		2.3	2.7	26.7	3,860	39.0	29.0	59.0	---
	01/22/14		1.5	1.6	18.9	2,290	---	---	---	---
	04/15/14		2.1	1.9	---	---	50.2	12.8	61.0	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-62A	04/15/14		---	---	---	---	32.3S	---	---	---
	07/21/14		1.3	1.5	---	---	---	---	---	---
MW-69D	04/24/09		1.4	1.6	2.64	1,680	---	---	---	---
	05/14/09		0.36	2.5	---	---	---	---	---	---
	08/04/09		0.26	2.1	---	---	---	---	---	---
	11/12/09		1.6	2.1	---	---	---	---	---	---
	02/15/10		1.3	2.1	---	---	---	---	---	---
	05/13/10		1.8	2.1	---	---	---	---	---	---
	08/03/10		1.7	1.7	---	---	---	---	---	---
	08/26/10		---	---	8.70	2,340	---	---	---	---
	10/28/10		1.7	2.7	7.92	2,310	---	---	---	---
	01/25/11		1.6	2.1	8.14	2,280	---	---	---	0.0386
	05/02/11		1.6	2.2	7.39	2,270	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0437
	06/01/11		1.6	2.0	---	---	---	---	---	---
	08/09/11		1.0	1.8	5.57	1,960	---	---	---	---
	11/01/11		1.5	2.0	6.54	2,070	---	---	---	---
	01/13/12		1.2	1.7	5.61	1,920	---	---	---	---
	04/09/12		1.5	1.6	6.49	1,970	---	---	---	---
	07/24/12		0.72	1.1	4.62	1,980	---	---	---	---
	10/17/12		0.98	1.2	6.02	2,070	---	---	---	---
	01/24/13		0.54	ND (1.0)	4.22	1,940	---	---	---	---
	04/11/13		0.44	ND (1.0)	4.86	2,050	---	---	---	---
	07/31/13		0.6	1.5	5.18	2,120	---	---	---	---
	10/16/13		0.95	1.3	7.92	2,130	---	---	---	---
	01/22/14		0.6	1.0	7.38	2,230	---	---	---	---
	01/22/14	FD	0.58	ND (1.0)	6.99	2,180	---	---	---	---
	04/11/14		---	---	---	---	20.7S	---	---	---
	04/11/14		0.86	1.1	---	---	28.7	13.9	28.0	---
	07/18/14		1.1	1.3	---	---	---	---	---	---
MW-69S	04/24/09		0.84	2.2	23.2	2,720	---	---	---	---

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-69S	05/14/09		0.41	ND (1.0)	---	---	---	---	---	---
	08/04/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	11/12/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/15/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/13/10		ND (0.2)	1.0	---	---	---	---	---	---
	08/03/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/26/10		---	---	66.0	4,260	---	---	---	---
	10/28/10		ND (0.2)	2.9J	68.7	4,720	---	---	---	---
	10/28/10	FD	ND (0.2)	ND (1.0)	70.2	4,260	---	---	---	---
	01/25/11		0.39	1.3	72.3	4,520	---	---	---	0.0525
	01/25/11	FD	0.4	1.1	70.1	3,820	---	---	---	0.0531
	05/02/11		1.1	3.3	76.0	4,560	---	---	---	---
	05/10/11		---	---	---	---	---	---	---	0.0546
	06/01/11		1.3	1.6	---	---	---	---	---	---
	08/09/11		ND (1.0)	2.1	77.9	4,300	---	---	---	---
	11/01/11		ND (0.25)	ND (1.0)	81.6	4,420	---	---	---	---
	01/13/12		ND (0.3)	1.7	82.7J	4,460	---	---	---	---
	04/09/12		0.18	1.3	79.0	5,300	---	---	---	---
	07/12/12		0.33	1.1	80.0	4,600	---	---	---	---
	10/17/12		0.51	ND (1.0)	85.2	4,440	---	---	---	---
	01/29/13		1.3	1.9	74.0	4,600	---	---	---	---
	04/11/13		0.37	1.4	88.4	4,350	---	---	---	---
	07/31/13		0.086	1.1	87.6	4,430	---	---	---	---
10/16/13		0.32	1.4	84.0	4,260	---	---	---	---	
01/22/14		1.3	2.9	48.6	3,820	---	---	---	---	
04/11/14		1.8	2.7	---	---	49.2	13.2	58.0	---	
07/18/14		1.8	2.1	---	---	---	---	---	---	
MW-72D	08/04/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	11/12/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/15/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/11/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-72D	08/03/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	ND (0.10)	350	---	---	---	---
	10/28/10		ND (0.2)	1.0	ND (0.50)	387	---	---	---	---
	01/25/11		ND (0.2)	ND (1.0)	ND (0.50)	359	---	---	---	0.0211
	04/27/11		ND (0.2)	2.1	ND (0.50)	364	---	---	---	---
	06/01/11		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/02/11		ND (0.2)	ND (1.0)	ND (0.50)	372	---	---	---	---
	11/02/11		ND (0.068)	ND (1.0)	ND (0.50)	436	---	---	---	---
	11/02/11	FD	ND (0.078)	ND (1.0)	ND (0.50)	365	---	---	---	---
	01/17/12		ND (0.06)	ND (1.0)	ND (0.50)	391	---	---	---	---
	04/06/12		ND (0.06)	ND (1.0)	ND (0.05)	380	---	---	---	---
	07/12/12		ND (0.06)	ND (1.0)	ND (0.05)	420	---	---	---	---
	10/10/12		ND (0.06)	ND (1.0)	ND (0.05)	460	---	---	---	---
	01/30/13		ND (0.06)	ND (1.0)	ND (0.05)	420	---	---	---	---
	04/09/13		0.067	ND (1.0)	ND (0.05)	370	---	---	---	---
	07/12/13		ND (0.06)	ND (1.0)	ND (0.05)	400	---	---	---	---
	07/12/13	FD	ND (0.06)	ND (1.0)	ND (0.05)	390	---	---	---	---
	10/01/13		ND (0.06)	ND (1.0)	ND (0.05)	390	---	---	---	---
	03/06/14		ND (0.06)	ND (1.0)	ND (0.05)	410	---	---	---	---
	04/16/14		0.068	ND (1.0)	---	---	ND (3.00)	4.22J	ND (0.67)	---
07/18/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---	
MW-72S	08/04/09		3.0	3.3	---	---	---	---	---	---
	11/12/09		5.4	5.6	---	---	---	---	---	---
	11/12/09	FD	5.4	5.6	---	---	---	---	---	---
	02/15/10		6.3	6.6	---	---	---	---	---	---
	05/11/10		6.1	6.6	---	---	---	---	---	---
	08/03/10		5.2	5.0	---	---	---	---	---	---
	08/25/10		---	---	8.10J	1,360	---	---	---	---
	10/28/10		7.2	6.3	8.40	1,240	---	---	---	---
	01/25/11		6.4	6.0	9.62	1,230	---	---	---	ND (0.02)
	04/27/11		4.7	6.1	9.14	1,270	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-72S	06/01/11		6.6	6.7	---	---	---	---	---	---
	08/02/11		3.7	4.3	9.11	1,830	---	---	---	---
	11/02/11		6.2	5.9	8.83	1,400	---	---	---	---
	01/17/12		5.8	6.5	11.9	1,090	---	---	---	---
	04/10/12		5.5	5.5	10.0	1,340	---	---	---	---
	07/23/12		5.0	5.1	10.2	1,340	---	---	---	---
	10/18/12		4.3	4.2	9.16	1,370	---	---	---	---
	01/31/13		4.6	5.0	9.93	1,330	---	---	---	---
	04/11/13		4.4	4.8	16.2	1,300	---	---	---	---
	08/01/13		4.4	4.9	10.6	1,370	---	---	---	---
	10/16/13		4.4	5.0	11.0	1,380	---	---	---	---
	10/16/13	FD	4.4	5.0	10.9	1,390	---	---	---	---
	01/20/14		4.1	4.7	11.6	1,350	---	---	---	---
	04/14/14		4.8	4.9	---	---	34.2	7.74	47.0	---
07/18/14		4.7	4.3	---	---	---	---	---	---	
MW-79D	05/12/10		ND (0.2)	ND (1.0)	ND (1.00)	281	---	---	---	---
	08/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/25/10		---	---	ND (0.10)	293	---	---	---	---
	10/28/10		ND (0.2)	ND (1.0)	ND (0.50)	236	---	---	---	---
	01/27/11		ND (0.2)	ND (1.0)	ND (0.50)	272	---	---	---	0.0255
	04/27/11		ND (0.2)	ND (1.0)	ND (0.50)	263	---	---	---	---
	07/28/11		ND (0.2)	ND (1.0)	ND (0.50)	246	---	---	---	---
	11/02/11		ND (0.065)	1.0	ND (0.50)	279	---	---	---	---
	01/17/12		ND (0.06)	ND (1.0)	ND (0.50)	244	---	---	---	---
	04/06/12		ND (0.06)	ND (1.0)	ND (0.05)	300	---	---	---	---
	07/17/12		0.17	ND (1.0)	ND (0.05)	260	---	---	---	---
	07/17/12	FD	0.19	ND (1.0)	ND (0.05)	260	---	---	---	---
	10/10/12		0.072	ND (1.0)	ND (0.05)	320	---	---	---	---
	01/30/13		ND (0.06)	ND (1.0)	ND (0.05)	280	---	---	---	---
04/09/13		ND (0.06)	ND (1.0)	ND (0.05)	260	---	---	---	---	
07/12/13		ND (0.06)	ND (1.0)	ND (0.05)	270	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
MW-79D	10/01/13		ND (0.06)	ND (1.0)	ND (0.05)	270	---	---	---	---
	03/06/14		ND (0.06)	ND (1.0)	ND (0.05)	270	---	---	---	---
	04/14/14		ND (0.065)	ND (1.0)	---	---	5.56	5.03	1.80	---
	07/18/14		ND (0.06)	ND (1.0)	---	---	---	---	---	---
MW-79S	06/21/10		4.7	5.1	11.5	1,440	---	---	---	---
	08/02/10		5.2	5.3	---	---	---	---	---	---
	08/25/10		---	---	12.0J	1,480	---	---	---	---
	10/28/10		5.5	5.5	12.2	1,390	---	---	---	---
	01/27/11		5.5	6.0	12.3	1,180	---	---	---	ND (0.02)
	04/27/11		5.2	6.0	13.8	1,380	---	---	---	---
	07/28/11		5.4	5.2	12.8	1,650	---	---	---	---
	07/28/11	FD	5.2	5.6	12.7	1,360	---	---	---	---
	11/02/11		5.2	5.2	11.9	1,420	---	---	---	---
	01/17/12		4.8	5.7	13.4	1,380	---	---	---	---
	04/10/12		5.2	5.5	11.4	1,710	---	---	---	---
	07/23/12		4.4	5.0	11.9	1,400	---	---	---	---
	10/17/12		5.1	5.4	11.7	1,430	---	---	---	---
	01/31/13		5.2	5.6	11.7	1,370	---	---	---	---
	04/11/13		4.9	5.6	11.3	1,370	---	---	---	---
	04/11/13	FD	4.9	5.6	11.3	1,380	---	---	---	---
	07/31/13		4.9	5.6	11.2	1,390	---	---	---	---
	10/14/13		5.0	5.0	11.4	1,430	---	---	---	---
	01/22/14		5.0	5.1	12.4	1,330	---	---	---	---
	04/14/14		5.5	7.5	---	---	56.3	9.78	50.0	---
07/18/14		5.3	5.3	---	---	---	---	---	---	
MW-80D	05/12/10		0.78	ND (1.0)	ND (1.00)	598	---	---	---	---
	08/02/10		1.0	1.2	---	---	---	---	---	---
	08/25/10		---	---	0.34J	573	---	---	---	---
	10/28/10		1.0	1.5	ND (0.50)	579	---	---	---	---
	10/28/10	FD	1.0	1.0	ND (0.50)	557	---	---	---	---
	01/27/11		1.2	1.4	ND (0.50)	648	---	---	---	ND (0.02)

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Historical Analytical Results for Groundwater Monitoring Wells
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-80D	01/27/11	FD	1.2	1.2	ND (0.50)	639	---	---	---	0.0211
	04/27/11		1.4	1.8	ND (0.50)	556	---	---	---	---
	07/28/11		1.4	1.2	ND (0.50)	547	---	---	---	---
	11/02/11		1.4	1.5	ND (0.50)	557	---	---	---	---
	01/17/12		1.4	ND (1.0)	ND (0.50)	561	---	---	---	---
	04/10/12		1.4	1.9	ND (0.50)	554	---	---	---	---
	07/20/12		0.93	1.1	ND (0.50)	554	---	---	---	---
	10/18/12		1.2	1.5	ND (0.50)	526	---	---	---	---
	01/24/13		1.3	1.5	ND (0.50)	525	---	---	---	---
	04/16/13		1.1	1.7	ND (0.50)	513	---	---	---	---
	07/31/13		1.2	1.5	ND (0.50)	510	---	---	---	---
	10/14/13		1.2	1.3	ND (0.50)	525	---	---	---	---
	01/22/14		1.3	1.2	1.37	502	---	---	---	---
	04/14/14		ND (1.4)	1.6	---	---	15.0	6.56	9.00	---
	07/24/14		1.3	1.6	---	---	---	---	---	---
MW-80S	05/12/10	ND (0.2)	ND (1.0)	ND (1.00)	1,260	---	---	---	---	
	08/02/10	ND (0.2)	ND (1.0)	---	---	---	---	---	---	
	08/25/10	---	---	0.72J	1,190	---	---	---	---	
	10/28/10	ND (0.2)	ND (1.0)	4.39	1,230	---	---	---	---	
	01/27/11	0.23	ND (1.0)	5.03	1,200	---	---	---	0.0434	
	04/27/11	ND (0.2)	ND (1.0)	6.97	1,310	---	---	---	---	
	07/28/11	ND (0.2)	ND (1.0)	8.86	1,330	---	---	---	---	
	11/02/11	0.36	ND (1.0)	7.73	1,230	---	---	---	---	
	01/17/12	0.32	ND (1.0)	2.34	1,360	---	---	---	---	
	04/06/12	0.92	ND (1.0)	9.00	1,400	---	---	---	---	
	07/20/12	0.32	ND (1.0)	10.2	1,370	---	---	---	---	
	10/10/12	0.81	ND (1.0)	9.90	1,400	---	---	---	---	
	01/30/13	0.58	1.3	9.70	1,400	---	---	---	---	
	04/16/13	1.7	1.9	10.4	1,310	---	---	---	---	
	07/31/13	1.4	1.9	9.36	1,330	---	---	---	---	
10/14/13	ND (0.06)	ND (1.0)	11.0	1,480	---	---	---	---		

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-80S	01/22/14		0.75	ND (1.0)	11.0	1,320	---	---	---	---
	04/14/14		ND (0.14)	ND (1.0)	---	---	46.9	16.1	38.0	---
	07/24/14		1.2	1.7	---	---	---	---	---	---
MW-87D	06/22/10		0.6	1.3	7.37	967	---	---	---	---
	08/02/10		1.4	1.4	---	---	---	---	---	---
	08/24/10		---	---	6.70J	1,000	---	---	---	---
	10/26/10		1.5	1.6	5.30J	844	---	---	---	---
	01/25/11		1.2	1.2	4.49	762	---	---	---	ND (0.02)
	05/04/11		1.6	2.6	6.34	988	---	---	---	---
	06/02/11		2.3	2.5	---	---	---	---	---	---
	07/28/11		2.7	2.6	5.38	808	---	---	---	---
	11/03/11		2.6	2.8	14.9	754	---	---	---	---
	01/17/12		1.9	2.2	2.60	674	---	---	---	---
	04/10/12		1.1	1.4	5.65	1,010	---	---	---	---
	07/24/12		0.94	1.4	6.56	890	---	---	---	---
	10/18/12		2.5	2.5	6.60	902	---	---	---	---
	01/24/13		2.5	3.0	8.26	1,020	---	---	---	---
	04/09/13		3.6	3.4	8.50	990	---	---	---	---
	07/31/13		3.4	4.0	9.37	1,110	---	---	---	---
	10/17/13		2.8	3.1	8.55	1,030	---	---	---	---
01/22/14		3.2	3.2	10.0	976	---	---	---	---	
MW-87S	04/16/14		3.4	3.5	---	---	25.5	7.28J	21.0	---
	07/23/14		2.8	3.4	---	---	---	---	---	---
	06/22/10		3.8	4.0	9.18	1,260	---	---	---	---
	08/02/10		2.2	2.0	---	---	---	---	---	---
	08/24/10		---	---	7.00J	1,160	---	---	---	---
	10/26/10		2.1	2.3	8.76	1,170	---	---	---	---
	01/25/11		3.4	3.2	9.92	1,250	---	---	---	ND (0.02)
05/04/11		2.9	3.8	10.3	1,180J	---	---	---	---	
06/02/11		3.3	3.5	---	---	---	---	---	---	
07/28/11		2.4	2.6	8.53	1,120	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
MW-87S	11/03/11		3.5	4.1	11.6	1,190	---	---	---	---
	01/17/12		2.7	3.4	11.2	1,220	---	---	---	---
	04/10/12		2.7	3.0	11.0	1,090	---	---	---	---
	07/24/12		2.3	2.6	10.2	1,160	---	---	---	---
	10/18/12		3.2	3.1	13.0	1,340	---	---	---	---
	01/24/13		3.5	4.2	12.9	1,340	---	---	---	---
	04/16/13		2.7	3.1	11.5	1,350	---	---	---	---
	07/31/13		2.6	3.0	11.8	1,140	---	---	---	---
	10/17/13		3.1	3.3	13.2	1,230	---	---	---	---
	01/22/14		2.7	2.9	14.2	1,210	---	---	---	---
	04/16/14		3.3	3.5	---	---	43.7	12.7J	39.0	---
07/23/14		2.8	3.3	---	---	---	---	---	---	
SA-MW-06D	10/25/07		55.1	68.6	0.789	---	---	---	---	---
	03/25/08		85.2	102	---	---	---	---	---	---
	05/13/08		336	313	0.647	---	---	---	---	---
	05/28/08		467	455	1.05	---	---	---	---	---
	06/23/08		116J	145	0.737	---	---	---	---	---
	07/23/08		169	156	0.787	---	---	---	---	---
	08/25/08		213	193	0.638	---	---	---	---	---
	09/08/08		211	189	0.742	---	---	---	---	---
	10/14/08		316	261	1.01	---	---	---	---	---
	11/11/08		249	212	0.721	---	---	---	---	---
	12/08/08		66.3	79.1	ND (0.63)	---	---	---	---	---
	01/12/09		251	235	0.64	---	---	---	---	---
	01/12/09	FD	249	229	0.67	---	---	---	---	---
	02/10/09		68.0	76.5	0.55	---	---	---	---	---
	03/10/09		67.6J	66.0J	0.46	---	---	---	---	---
	04/14/09		173	162	0.74	---	---	---	---	---
05/11/09		136	130	0.75J	---	---	---	---	---	
05/11/09	FD	140	134	1.30J	---	---	---	---	---	
06/09/09		165	164	0.83	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-06D	07/14/09		176	154	0.59	---	---	---	---	---
	08/12/09		166	173	0.72	---	---	---	---	---
	08/12/09	FD	168	157	0.72	---	---	---	---	---
	11/03/09		226	222	0.74	---	---	---	---	---
	02/03/10		365	322	0.92	---	---	---	---	---
	02/03/10	FD	360	324	0.92	---	---	---	---	---
	05/20/10		196	171	0.84	---	---	---	---	---
	08/12/10		192	177	---	---	---	---	---	---
	02/08/11		379	357	---	---	---	---	---	ND (0.02)
	08/11/11		150	130	---	---	---	---	---	ND (0.10)
	11/10/11		120	110	0.82	---	---	---	---	ND (0.10)
	02/08/12		94.0	84.0	0.68	---	---	---	---	ND (0.10)
	08/07/12		180	170	0.80	---	---	---	---	ND (0.10)
	02/07/13		130	140	0.33	---	---	---	---	---
	05/03/13		100	110	0.26	---	---	---	---	---
	08/06/13		110	99.0	0.25	---	---	---	---	ND (0.10)
	10/01/13		250	---	---	---	---	---	---	ND (0.10)
	02/04/14		72.0	72.0	0.14	---	---	---	---	0.057
	04/08/14		100	---	0.19	370	6.61J	ND (4.00)	4.50	ND (0.10)
	08/06/14		51.0	54.0	0.11	---	---	---	---	ND (0.10)
SA-MW-06S	10/25/07		235	213	3.10	---	---	---	---	---
	03/25/08		700	743	---	---	---	---	---	---
	05/13/08		663	751	4.86	---	---	---	---	---
	05/28/08		764	802	4.74	---	---	---	---	---
	05/28/08	FD	759	802	4.76	---	---	---	---	---
	06/23/08		495J	512	4.50	---	---	---	---	---
	07/23/08		733	673	4.54	---	---	---	---	---
	08/25/08		997	878	4.67	---	---	---	---	---
	09/08/08		879	895	4.61	---	---	---	---	---
	10/14/08		901	709	4.84	---	---	---	---	---
	11/11/08		1,020	831	4.69	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-06S	11/11/08	FD	1,220	810	4.80	---	---	---	---	---
	12/08/08		933	846	4.20	---	---	---	---	---
	01/12/09		971	1,140	4.40	---	---	---	---	---
	02/10/09		1,030	1,140	4.90J	---	---	---	---	---
	03/10/09		1,040J	956J	4.20	---	---	---	---	---
	03/10/09	FD	1,070J	979J	4.20	---	---	---	---	---
	04/14/09		1,100	1,090	4.60	---	---	---	---	---
	05/11/09		996	895	4.40J	---	---	---	---	---
	06/09/09		1,360	1,360	4.80	---	---	---	---	---
	07/14/09		1,260	1,460	4.30	---	---	---	---	---
	08/12/09		1,820	1,680	3.90	---	---	---	---	---
	11/03/09		1,740	1,740	4.00	---	---	---	---	---
	02/03/10		1,930	1,730	3.90	---	---	---	---	---
	05/20/10		1,610	1,680	4.10	---	---	---	---	---
	08/12/10		1,700	1,610	---	---	---	---	---	---
	02/08/11		1,570	1,410	---	---	---	---	---	ND (0.02)
	08/11/11		1,000	1,100	---	---	---	---	---	ND (0.10)
	11/10/11		990	1,000	4.30	---	---	---	---	ND (0.20)
	02/08/12		1,000	940	4.30	---	---	---	---	ND (0.10)
	08/07/12		1,100	1,100	4.50	---	---	---	---	ND (0.10)
	02/07/13		1,100	1,000	3.90	---	---	---	---	---
	02/07/13	FD	1,100	1,100	4.10	---	---	---	---	---
	05/03/13		980	1,000	3.50	---	---	---	---	---
	08/06/13		720	670	4.20	---	---	---	---	ND (0.10)
	10/01/13		550	---	---	---	---	---	---	ND (0.10)
	02/04/14		510	510	4.10	---	---	---	---	0.021
04/08/14		600	---	1.90	510	18.0J	ND (4.00)	18.0	ND (0.10)	
08/06/14		520	570	1.80	---	---	---	---	ND (0.10)	
SA-MW-10D	10/24/07		2,160	2,150	3.32	---	---	---	---	---
	03/25/08		2,580J	2,380	---	---	---	---	---	---
	03/25/08	FD	2,580J	2,470	---	---	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-10D	05/13/08		2,290	2,450	2.28	---	---	---	---	---
	05/28/08		1,660J	1,430	7.25	---	---	---	---	---
	06/24/08		339	318	12.9	---	---	---	---	---
	06/24/08	FD	331	301	13.0	---	---	---	---	---
	07/23/08		2,400	2,110	4.04	---	---	---	---	---
	08/25/08		2,270	2,040	4.57	---	---	---	---	---
	09/09/08		2,480	2,160	3.50	---	---	---	---	---
	10/14/08		2,540	2,120	3.80	---	---	---	---	---
	11/11/08		2,670	2,190	3.44	---	---	---	---	---
	12/09/08		2,010	2,180	2.70	---	---	---	---	---
	01/12/09		2,340	2,370	2.80	---	---	---	---	---
	02/11/09		2,030	2,010	5.40J	---	---	---	---	---
	03/10/09		2,370J	2,120J	3.40	---	---	---	---	---
	04/13/09		2,320	2,740J	3.40	---	---	---	---	---
	04/13/09	FD	2,320	2,060J	3.20	---	---	---	---	---
	05/11/09		2,410	2,220	3.70J	---	---	---	---	---
	06/09/09		2,390	2,490	3.60	---	---	---	---	---
	06/09/09	FD	2,380	2,430	4.10	---	---	---	---	---
	07/13/09		2,290	2,200	3.70	---	---	---	---	---
	07/13/09	FD	2,270	2,100	3.60	---	---	---	---	---
	08/11/09		2,200	1,890	3.10	---	---	---	---	---
	11/04/09		1,910	2,180	2.20	---	---	---	---	---
	11/04/09	FD	2,110	2,230	2.20	---	---	---	---	---
	02/04/10		2,000	2,100	1.70	---	---	---	---	---
	05/20/10		2,020	1,980	2.40	---	---	---	---	---
	08/12/10		2,050	2,030	---	---	---	---	---	---
	02/08/11		2,040	1,940	---	---	---	---	---	ND (0.02)
04/26/11		2,000	2,100	1.10	---	---	---	---	---	
08/11/11		2,400	2,700	---	---	---	---	---	ND (0.10)	
11/10/11		2,800	2,800	2.10	---	---	---	---	ND (0.10)	
02/08/12		2,700	2,500	2.10	---	---	---	---	ND (0.10)	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-10D	02/08/12	FD	2,700	2,600	2.10	---	---	---	---	ND (0.10)
	05/01/12		2,100	2,100	4.80	---	---	---	---	---
	08/07/12		2,000	1,900	5.90	---	---	---	---	ND (0.10)
	02/08/13		2,700	3,000	2.60	---	---	---	---	---
	05/03/13		2,600	2,400	4.60	---	---	---	---	---
	08/06/13		3,000	2,800	2.10	---	---	---	---	ND (0.10)
	10/02/13		3,100	---	---	---	---	---	---	ND (0.10)
	10/02/13	FD	3,200	---	---	---	---	---	---	ND (0.10)
	02/04/14		2,800	2,700	2.80	---	---	---	---	ND (0.02)
	02/04/14	FD	2,800	2,700	2.90	---	---	---	---	ND (0.02)
	04/10/14		1,700	---	6.40	640	28.6	6.99J	20.0	ND (0.10)
08/06/14		400	430	11.0	---	---	---	---	ND (0.10)	
SA-MW-10S	10/24/07		2.2	3.3	16.3	---	---	---	---	---
	03/25/08		4.9J	6.2	---	---	---	---	---	---
	05/13/08		9.0	5.3	16.3	---	---	---	---	---
	05/28/08		2.8	5.1	15.5	---	---	---	---	---
	06/24/08		3.6	4.0	15.1	---	---	---	---	---
	07/23/08		5.5	5.2	15.5	---	---	---	---	---
	08/25/08		6.4	8.4	15.4	---	---	---	---	---
	09/09/08		12.1	13.2	15.4	---	---	---	---	---
	10/14/08		18.4	22.3	16.2	---	---	---	---	---
	11/11/08		8.3	8.5	15.9	---	---	---	---	---
	12/09/08		6.5	8.4	15.0	---	---	---	---	---
	01/12/09		8.7	218	15.0J	---	---	---	---	---
	02/11/09		5.3	7.4	16.0J	---	---	---	---	---
	03/10/09		6.7J	7.4J	13.0J	---	---	---	---	---
	04/13/09		8.0	7.8	14.0J	---	---	---	---	---
	05/11/09		6.1	6.7	15.0J	---	---	---	---	---
	06/09/09		5.0	6.0	15.0J	---	---	---	---	---
07/13/09		6.0	7.8	16.0	---	---	---	---	---	
08/11/09		14.4	13.9	15.0	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-10S	11/04/09		31.6	32.7	16.0J	---	---	---	---	---
	02/04/10		27.1	28.0	15.0J	---	---	---	---	---
	05/20/10		17.6	16.8	15.0	---	---	---	---	---
	05/20/10	FD	18.0	17.9	15.0J	---	---	---	---	---
	08/12/10		226J	162J	---	---	---	---	---	---
	08/12/10	FD	220J	164J	---	---	---	---	---	---
	02/08/11		218	204	---	---	---	---	---	ND (0.02)
	08/11/11		58.0	55.0	---	---	---	---	---	ND (0.10)
	11/10/11		72.0	68.0	14.0	---	---	---	---	ND (0.50)
	02/08/12		36.0	34.0	15.0	---	---	---	---	ND (0.10)
	08/07/12		36.0	33.0	15.0	---	---	---	---	ND (0.10)
	02/08/13		26.0	22.0	16.0	---	---	---	---	---
	05/03/13		15.0	15.0	13.0	---	---	---	---	---
	08/06/13		35.0	31.0	11.0	---	---	---	---	ND (0.10)
	10/02/13		50.0	---	---	---	---	---	---	ND (0.10)
	02/04/14		82.0	82.0	9.50	---	---	---	---	0.033
	04/10/14		88.0	---	11.0	800	34.5	4.20J	32.0	ND (0.10)
	04/10/14		---	---	---	---	27.5S	---	---	---
	08/06/14		87.0	91.0	6.50	---	---	---	---	ND (0.10)
SA-MW-11D	10/22/07		73.0	70.1	0.972	---	---	---	---	---
	03/24/08		72.2J	81.1	---	---	---	---	---	---
	05/13/08		87.6	96.6	0.906	---	---	---	---	---
	05/13/08	FD	86.9	91.2	0.887	---	---	---	---	---
	05/29/08		81.0	85.1	---	---	---	---	---	---
	06/24/08		74.5	79.7	---	---	---	---	---	---
	07/23/08		81.7	76.3	---	---	---	---	---	---
	08/25/08		90.5	84.6	---	---	---	---	---	---
	09/09/08		85.8	85.3	---	---	---	---	---	---
	10/15/08		124	89.1	---	---	---	---	---	---
	11/13/08		134	99.8	---	---	---	---	---	---
11/13/08	FD	134	97.3	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-11D	12/09/08		87.3	77.0	---	---	---	---	---	---
	12/09/08	FD	85.7	83.5	ND (0.10)	---	---	---	---	---
	01/13/09		96.2	87.7	---	---	---	---	---	---
	02/10/09		92.8	85.2	---	---	---	---	---	---
	03/10/09		83.8J	72.9J	---	---	---	---	---	---
	04/13/09		89.8	86.7	---	---	---	---	---	---
	05/11/09		88.7	88.0	---	---	---	---	---	---
	05/11/09	FD	86.8	88.1	---	---	---	---	---	---
	06/08/09		94.2	89.0	---	---	---	---	---	---
	07/13/09		61.5	89.0	---	---	---	---	---	---
	08/11/09		96.6	89.6	---	---	---	---	---	---
	11/02/09		99.5	101	---	---	---	---	---	---
	02/02/10		109	112	---	---	---	---	---	---
	05/20/10		141	120	---	---	---	---	---	---
	08/17/10		128	137	1.10	---	---	---	---	---
	02/01/11		130	126	1.20	---	---	---	---	---
	02/01/11	FD	129	119	1.20	---	---	---	---	---
	07/26/11		110	130	1.10	---	---	---	---	---
	01/23/12		120	120	1.10	---	---	---	---	---
	08/01/12		110	110	1.10	---	---	---	---	---
	01/14/13		110	110	1.20	---	---	---	---	---
	04/18/13		120	---	---	---	---	---	---	---
	07/17/13		120	---	1.20	---	---	---	---	---
10/03/13		160	---	---	---	---	---	---	---	
01/07/14		150	---	1.30	---	---	---	---	---	
01/07/14	FD	150	---	1.30	---	---	---	---	---	
04/10/14		110	---	1.30	370	8.89	ND (4.00)	7.40	---	
07/21/14		120	---	1.10	---	---	---	---	---	
SA-MW-11S	10/22/07		397	401	7.07	---	---	---	---	
	03/24/08		835J	904	---	---	---	---	---	
	05/13/08		930	967	11.7	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-11S	05/29/08		915	1,020	---	---	---	---	---	---
	06/24/08		973	992	---	---	---	---	---	---
	07/23/08		1,050	986	---	---	---	---	---	---
	08/25/08		1,150	977	---	---	---	---	---	---
	09/09/08		1,060	972	---	---	---	---	---	---
	10/15/08		1,380	973	---	---	---	---	---	---
	11/13/08		1,080	986	---	---	---	---	---	---
	12/09/08		952	986	---	---	---	---	---	---
	01/13/09		1,040	988	---	---	---	---	---	---
	02/10/09		1,040	1,040	---	---	---	---	---	---
	03/10/09		1,000J	904J	---	---	---	---	---	---
	04/13/09		1,010	1,020	---	---	---	---	---	---
	05/11/09		1,060	890	---	---	---	---	---	---
	06/08/09		1,100	1,090	---	---	---	---	---	---
	07/13/09		990	970	---	---	---	---	---	---
	08/11/09		1,090	979	---	---	---	---	---	---
	11/02/09		974	993	---	---	---	---	---	---
	02/02/10		904	888	---	---	---	---	---	---
	05/20/10		803	753	---	---	---	---	---	---
	08/17/10		842	806	8.40	---	---	---	---	---
	02/01/11		735	690	10.0	---	---	---	---	---
	04/26/11		640	660	10.0	---	---	---	---	---
	07/26/11		670	720	10.0	---	---	---	---	---
	01/23/12		580	550	11.0	---	---	---	---	---
	08/01/12		540	550	11.0	---	---	---	---	---
	01/14/13		490	450	11.0	---	---	---	---	---
	04/18/13		450	---	---	---	---	---	---	---
	07/17/13		560	---	11.0	---	---	---	---	---
	10/07/13		670	---	---	---	---	---	---	---
	01/07/14		530	---	11.0	---	---	---	---	---
	04/10/14		520	---	11.0	800	46.2	13.0J	29.0	---

Table E-1

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-11S	04/10/14		---	---	---	---	25.2S	---	---	---
	04/10/14	FD	---	---	---	---	22.7S	---	---	---
	04/10/14	FD	540	---	11.0	810	42.6	10.4J	30.0	---
	07/21/14		430	---	10.0	---	---	---	---	---
SA-MW-12D	10/24/07		82.7	85.1	1.07	435	---	---	---	---
	03/24/08		103J	116	---	---	---	---	---	---
	05/15/08		117	115	1.02	---	---	---	---	---
	05/29/08		90.2	100	---	---	---	---	---	---
	06/24/08		104	96.3	---	---	---	---	---	---
	07/24/08		102	95.2	---	---	---	---	---	---
	08/26/08		106	90.0	---	---	---	---	---	---
	09/09/08		93.1	91.6	---	---	---	---	---	---
	10/15/08		131	88.2	---	---	---	---	---	---
	11/13/08		115	81.2	---	---	---	---	---	---
	12/09/08		75.9	79.2	---	---	---	---	---	---
	01/13/09		92.2	83.7	---	---	---	---	---	---
	02/10/09		75.3	75.0	---	---	---	---	---	---
	03/09/09		74.9J	66.2J	---	---	---	---	---	---
	04/13/09		72.5	69.4	---	---	---	---	---	---
	05/11/09		102	102	---	---	---	---	---	---
	06/08/09		84.8	82.0	---	---	---	---	---	---
	07/13/09		79.1	69.8	---	---	---	---	---	---
	08/10/09		92.4	85.8	---	---	---	---	---	---
	11/02/09		90.9	92.2	---	---	---	---	---	---
	02/02/10		92.6	87.5	---	---	---	---	---	---
05/20/10		123	112	---	---	---	---	---	---	
08/17/10		101	88.3	0.77	---	---	---	---	---	
02/01/11		94.3	81.7	0.78	---	---	---	---	---	
07/27/11		88.0	98.0	0.87	---	---	---	---	---	
01/23/12		55.0	55.0	0.84	---	---	---	---	---	
08/01/12		48.0	47.0	0.74	---	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-12D	01/14/13		68.0	65.0	0.79	---	---	---	---	---
	04/18/13		73.0	---	---	---	---	---	---	---
	07/17/13		80.0	---	0.89	---	---	---	---	---
	10/03/13		76.0	---	---	---	---	---	---	---
	01/07/14		71.0	---	0.88	---	---	---	---	---
	04/09/14		67.0	---	0.98	340	6.33	ND (4.00)	5.50	---
	07/07/14		44.0	---	0.79	---	---	---	---	---
SA-MW-12S	10/24/07		90.7	90.0	3.98	575	---	---	---	---
	03/24/08		147J	153	---	---	---	---	---	---
	05/15/08		184	175	3.46	---	---	---	---	---
	05/29/08		140	156	---	---	---	---	---	---
	06/24/08		298	276	---	---	---	---	---	---
	07/24/08		371	393	---	---	---	---	---	---
	08/26/08		449	401	---	---	---	---	---	---
	09/09/08		991	846	---	---	---	---	---	---
	10/15/08		996	608	---	---	---	---	---	---
	11/13/08		929	831	---	---	---	---	---	---
	12/09/08		739	730	---	---	---	---	---	---
	01/13/09		864	733	---	---	---	---	---	---
	02/10/09		730	834	---	---	---	---	---	---
	03/09/09		684J	644J	---	---	---	---	---	---
	04/13/09		636	646	---	---	---	---	---	---
	05/11/09		634	611	---	---	---	---	---	---
	06/08/09		596	596	---	---	---	---	---	---
	07/13/09		590	539	---	---	---	---	---	---
	08/10/09		614	564	---	---	---	---	---	---
	11/03/09		535	541	---	---	---	---	---	---
02/02/10		546	480	---	---	---	---	---	---	
05/20/10		513	495	---	---	---	---	---	---	
05/20/10	FD	517	478	---	---	---	---	---	---	
08/17/10		553	469	5.80	---	---	---	---	---	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-12S	08/17/10	FD	553	529	5.80	---	---	---	---	---
	02/01/11		469	445	5.70	---	---	---	---	---
	04/26/11		450	450	5.50	---	---	---	---	---
	04/26/11	FD	450	450	5.60	---	---	---	---	---
	07/27/11		390	380	7.00	---	---	---	---	---
	01/23/12		570	570	5.10	---	---	---	---	---
	08/01/12		520	540	4.90	---	---	---	---	---
	08/01/12	FD	520	510	4.90	---	---	---	---	---
	01/14/13		590	540	4.80	---	---	---	---	---
	04/18/13		500	---	---	---	---	---	---	---
	04/18/13	FD	510	---	---	---	---	---	---	---
	07/17/13		440	---	5.00	---	---	---	---	---
	10/03/13		490	---	---	---	---	---	---	---
	01/09/14		630	---	4.90	---	---	---	---	---
	04/09/14		510	---	4.90	410	9.91	ND (4.00)	6.60	---
	07/07/14		500	---	4.90	---	---	---	---	---
	SA-MW-14D	10/22/07		124	117	4.76	---	---	---	---
10/22/07		FD	123	115	---	---	---	---	---	---
03/24/08			98.0J	110	---	---	---	---	---	---
05/15/08			104	104	4.97	---	---	---	---	---
05/29/08			106	107	---	---	---	---	---	---
06/24/08			104	103	---	---	---	---	---	---
07/24/08			106	96.9	---	---	---	---	---	---
08/26/08			116	94.6	---	---	---	---	---	---
09/09/08			106	96.6	---	---	---	---	---	---
10/15/08			102	71.6	---	---	---	---	---	---
11/13/08			102	65.7	---	---	---	---	---	---
12/09/08			71.5	66.0	---	---	---	---	---	---
01/13/09			65.2	59.5	---	---	---	---	---	---
02/11/09			91.0	93.6	---	---	---	---	---	---
02/12/09		76.6	68.2	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-14D	03/10/09		90.9J	98.3J	---	---	---	---	---	---
	04/13/09		94.4	86.0	---	---	---	---	---	---
	05/11/09		55.6	62.5	---	---	---	---	---	---
	06/09/09		61.9	61.3	---	---	---	---	---	---
	07/13/09		63.8	54.5	---	---	---	---	---	---
	08/10/09		71.9	63.6	---	---	---	---	---	---
	11/02/09		66.2	69.7	---	---	---	---	---	---
	02/03/10		70.9	64.0	---	---	---	---	---	---
	05/20/10		67.8	65.0	---	---	---	---	---	---
	08/17/10		79.1	79.5	6.40	---	---	---	---	---
	02/01/11		64.2	63.1	6.70	---	---	---	---	---
	07/27/11		65.0	74.0	7.50	---	---	---	---	---
	01/23/12		59.0	57.0	8.00	---	---	---	---	---
	08/01/12		59.0	57.0	8.10	---	---	---	---	---
	01/14/13		56.0	53.0	8.00	---	---	---	---	---
	04/18/13		56.0	---	---	---	---	---	---	---
	07/17/13		55.0	---	7.90	---	---	---	---	---
	10/03/13		55.0	---	---	---	---	---	---	---
	01/09/14		58.0	---	6.30	---	---	---	---	---
04/09/14		50.0	---	9.40	720	57.1	9.57	37.0	---	
07/07/14		44.0	---	9.70	---	---	---	---	---	
SA-MW-14S	10/22/07		50.0	50.2	8.39	---	---	---	---	---
	03/24/08		60.6J	70.0	---	---	---	---	---	---
	03/24/08	FD	61.5J	71.0	---	---	---	---	---	---
	05/15/08		44.4	54.5	7.48	---	---	---	---	---
	05/29/08		50.2	56.8	---	---	---	---	---	---
	06/24/08		68.3	67.9	---	---	---	---	---	---
	07/24/08		73.0	66.3	---	---	---	---	---	---
	08/26/08		81.4	71.5	---	---	---	---	---	---
	09/09/08		79.4	72.7	---	---	---	---	---	---
	10/15/08		109	70.6	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-14S	11/13/08		120	82.0	---	---	---	---	---	---
	12/09/08		79.2	79.1	---	---	---	---	---	---
	01/13/09		47.1	50.5	---	---	---	---	---	---
	02/11/09		87.2	90.7	---	---	---	---	---	---
	02/12/09		89.0	76.7	---	---	---	---	---	---
	03/10/09		84.8J	74.0J	---	---	---	---	---	---
	04/13/09		86.4	81.4	---	---	---	---	---	---
	05/11/09		76.7	76.1	---	---	---	---	---	---
	06/09/09		87.9	82.8	---	---	---	---	---	---
	07/13/09		83.0	80.7	---	---	---	---	---	---
	08/10/09		90.9	80.2	---	---	---	---	---	---
	11/02/09		85.0	85.9	---	---	---	---	---	---
	02/03/10		91.6	82.5	---	---	---	---	---	---
	05/20/10		69.6	63.9	---	---	---	---	---	---
	08/17/10		71.5J	56.7J	6.30	---	---	---	---	---
	02/01/11		37.9	37.1	10.0	---	---	---	---	---
	07/27/11		54.0	61.0	9.30	---	---	---	---	---
	01/23/12		72.0	70.0	8.90	---	---	---	---	---
	01/23/12	FD	73.0	71.0	9.00	---	---	---	---	---
	08/01/12		84.0	83.0	8.00	---	---	---	---	---
	01/14/13		95.0	90.0	8.50	---	---	---	---	---
	04/18/13		97.0	---	---	---	---	---	---	---
	07/17/13		98.0	---	8.40	---	---	---	---	---
07/17/13	FD	99.0	---	8.50	---	---	---	---	---	
10/03/13		97.0	---	---	---	---	---	---	---	
01/09/14		85.0	---	9.10	---	---	---	---	---	
04/09/14		100	---	9.40	740	36.1	6.55	34.0	---	
07/07/14		100	---	9.30	---	---	---	---	ND (0.10)	
SA-MW-15D	10/25/07		235	233	4.14	---	---	---	---	
	10/25/07	FD	237	228	---	---	---	---	---	
	03/25/08		246	280	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-15D	05/15/08		247	279	4.79	---	---	---	---	---
	05/29/08		258	266	---	---	---	---	---	---
	06/24/08		266	266	---	---	---	---	---	---
	07/24/08		292	262	---	---	---	---	---	---
	08/26/08		310	257	---	---	---	---	---	---
	09/09/08		280	252	---	---	---	---	---	---
	10/15/08		414	258	---	---	---	---	---	---
	11/13/08		413	251	---	---	---	---	---	---
	12/09/08		307	285	---	---	---	---	---	---
	01/13/09		324	264	---	---	---	---	---	---
	02/11/09		265	290	---	---	---	---	---	---
	03/09/09		266J	231J	---	---	---	---	---	---
	04/13/09		271	262	---	---	---	---	---	---
	05/11/09		278	282	---	---	---	---	---	---
	06/09/09		257	268	---	---	---	---	---	---
	07/14/09		292	258	---	---	---	---	---	---
	08/10/09		280	254	---	---	---	---	---	---
	08/10/09	FD	281	257	---	---	---	---	---	---
	11/05/09		255	239	5.50	---	---	---	---	---
	02/04/10		233	234	5.10	---	---	---	---	---
	05/20/10		240	226	---	---	---	---	---	---
	08/17/10		223	219	4.40	---	---	---	---	---
	02/01/11		227	220	4.70	---	---	---	---	---
	07/27/11		250	260	5.60	---	---	---	---	---
	07/27/11	FD	250	260	5.70	---	---	---	---	---
	01/23/12		240	240	8.70	---	---	---	---	---
	08/06/12		180	160	9.00	---	---	---	---	---
	01/14/13		140	120	9.90	---	---	---	---	---
	04/18/13		120	---	---	---	---	---	---	---
	07/18/13		120	---	9.20	---	---	---	---	---
	10/08/13		110	---	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-15D	01/07/14		110	---	9.10	---	---	---	---	---
	01/07/14	FD	110	---	9.20	---	---	---	---	---
	04/09/14		100	---	11.0	790	68.6	10.6	44.0	---
	07/07/14		90.0	---	11.0	---	---	---	---	ND (0.10)
SA-MW-15S	10/25/07		93.6	99.5	7.55	---	---	---	---	---
	03/25/08		117	137	---	---	---	---	---	---
	05/15/08		96.6	130	11.9	---	---	---	---	---
	05/15/08	FD	91.6	112	11.9	---	---	---	---	---
	05/29/08		109	116	---	---	---	---	---	---
	06/24/08		106J	114	---	---	---	---	---	---
	07/24/08		112	105	---	---	---	---	---	---
	08/26/08		132	109	---	---	---	---	---	---
	09/09/08		126	113	---	---	---	---	---	---
	10/15/08		158	108	---	---	---	---	---	---
	11/13/08		161	121	---	---	---	---	---	---
	12/09/08		125	117	---	---	---	---	---	---
	01/13/09		116	109	---	---	---	---	---	---
	02/11/09		117	136	---	---	---	---	---	---
	03/09/09		106J	101J	---	---	---	---	---	---
	04/13/09		110	109	---	---	---	---	---	---
	05/11/09		110	112	---	---	---	---	---	---
	06/09/09		108	111	---	---	---	---	---	---
	07/14/09		118	116	---	---	---	---	---	---
	08/10/09		111	105	---	---	---	---	---	---
	11/05/09		91.2	96.7	13.0J	---	---	---	---	---
02/04/10		114	95.8	12.0J	---	---	---	---	---	
05/20/10		103	93.5	---	---	---	---	---	---	
08/17/10		102	98.0	10.0	---	---	---	---	---	
02/01/11		97.3	94.0	11.0	---	---	---	---	---	
07/27/11		110	130	12.0	---	---	---	---	---	
01/23/12		75.0	74.0	12.0	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SA-MW-15S	08/06/12		50.0	46.0	12.0	---	---	---	---	---
	01/14/13		36.0	35.0	12.0	---	---	---	---	---
	04/18/13		41.0	---	---	---	---	---	---	---
	07/18/13		53.0	---	11.0	---	---	---	---	---
	10/08/13		34.0	---	---	---	---	---	---	---
	01/09/14		51.0	---	11.0	---	---	---	---	---
	04/09/14		32.0	---	12.0	840	43.0	11.8	43.0	---
	07/10/14		29.0	---	12.0	---	---	---	---	ND (0.10)
SC-MW-01D	07/10/14	FD	29.0	---	12.0	---	---	---	---	ND (0.10)
	04/24/09		1.4	1.6	---	770	---	---	---	---
	08/27/09		1.2	1.4	---	---	---	---	---	---
	11/13/09		ND (1.2)	1.2	---	---	---	---	---	---
	11/13/09	FD	ND (1.2)	1.2	---	---	---	---	---	---
	02/01/10		1.2	1.7	---	---	---	---	---	---
	05/17/10		1.2	1.6	---	---	---	---	---	---
	08/05/10		1.1	1.0	11.0	---	---	---	---	---
	11/03/10		1.1	1.3	10.0	---	---	---	---	ND (0.02)
	02/03/11		1.2	1.6	10.0	---	---	---	---	ND (0.02)
	05/04/11		1.0	ND (1.0)	10.0	---	---	---	---	ND (0.10)
	08/02/11		1.1	1.0	12.0	---	---	---	---	ND (0.10)
	11/07/11		1.0	1.2	9.90	---	---	---	---	ND (0.50)
	02/09/12		1.1	1.1	10.0	---	---	---	---	ND (0.10)
	02/09/12	FD	1.1	1.0	11.0	---	---	---	---	ND (0.10)
	05/03/12		1.0	1.3	9.50	---	---	---	---	0.56J
	08/08/12		1.3	1.1	9.70	---	---	---	---	ND (0.10)
	11/07/12		1.2	3.7	9.20	---	---	---	---	ND (0.10)
	02/06/13		1.2	1.2	9.40	---	---	---	---	ND (0.10)
	02/06/13	FD	1.2	1.2	9.00	---	---	---	---	ND (0.10)
	05/03/13		1.2	1.4	9.10	---	---	---	---	ND (0.10)
08/07/13		1.1	1.1	9.10	---	---	---	---	ND (0.10)	
08/07/13	FD	1.1	1.0	9.20	---	---	---	---	ND (0.10)	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-01D	11/07/13		1.2	1.2	8.70	---	---	---	---	ND (0.10)
	02/05/14		1.1	1.3	8.80	---	---	---	---	ND (0.02)
	05/07/14		1.0	1.2	8.90	700	30.4	7.22	28.0	ND (0.10)
	08/07/14		0.96	1.2	8.60	---	---	---	---	ND (0.10)
SC-MW-01S	04/24/09		0.56	1.2	---	602	---	---	---	---
	08/27/09		0.56	1.0	---	---	---	---	---	---
	11/13/09		ND (0.6)	ND (1.0)	---	---	---	---	---	---
	02/01/10		0.54	1.8	---	---	---	---	---	---
	05/17/10		0.65	1.2	---	---	---	---	---	---
	08/05/10		0.53	ND (1.0)	7.90	---	---	---	---	---
	11/03/10		0.54	ND (1.0)	7.70	---	---	---	---	ND (0.02)
	02/03/11		0.62	ND (1.0)	7.70	---	---	---	---	ND (0.02)
	05/04/11		0.55	ND (1.0)	8.40	---	---	---	---	ND (0.10)
	08/02/11		0.61	ND (1.0)	8.10	---	---	---	---	ND (0.10)
	11/07/11		0.55	ND (1.0)	7.60	---	---	---	---	ND (0.50)
	02/09/12		0.62	ND (1.0)	7.90	---	---	---	---	ND (0.10)
	05/03/12		0.65	ND (1.0)	7.60	---	---	---	---	0.28
	08/08/12		0.73	ND (1.0)	6.90	---	---	---	---	ND (0.10)
	11/07/12		0.63	ND (1.0)	7.10	---	---	---	---	ND (0.10)
	02/06/13		0.67	ND (1.0)	6.60	---	---	---	---	ND (0.10)
	05/03/13		0.7	1.1	6.80	---	---	---	---	ND (0.10)
	08/07/13		0.65	ND (1.0)	7.00	---	---	---	---	ND (0.10)
	11/07/13		0.67	ND (1.0)	6.60	---	---	---	---	ND (0.10)
	02/05/14		0.61	ND (1.0)	6.80	---	---	---	---	0.024
05/07/14		0.61	ND (1.0)	14.0	540	12.6	ND (4.00)	9.30	ND (0.10)	
08/07/14		0.57	ND (1.0)	7.40	---	---	---	---	ND (0.10)	
SC-MW-03D	04/16/09		246	221	---	380	---	---	---	---
	08/27/09		220	232	---	---	---	---	---	---
	11/13/09		379	353	---	---	---	---	---	---
	02/01/10		396	357	---	---	---	---	---	---
	05/17/10		392	324	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SC-MW-03D	08/05/10		338	321	0.67	---	---	---	---	---
	11/03/10		411	371	0.71	---	---	---	---	ND (0.02)
	02/04/11		386	342	0.87	---	---	---	---	ND (0.02)
	05/04/11		350	370	0.93	---	---	---	---	ND (0.10)
	05/04/11	FD	350	360	1.00	---	---	---	---	ND (0.10)
	08/02/11		310	280	2.90	---	---	---	---	ND (0.10)
	11/07/11		350	350	0.76	---	---	---	---	ND (0.10)
	02/09/12		330	340	1.00	---	---	---	---	ND (0.10)
	05/03/12		380	420	0.74	---	---	---	---	0.14
	08/08/12		350	350	1.30	---	---	---	---	ND (0.10)
	11/07/12		400	390	0.70	---	---	---	---	ND (0.10)
	02/06/13		340	330	1.90	---	---	---	---	ND (0.10)
	05/03/13		340	330	0.70	---	---	---	---	ND (0.10)
	05/03/13	FD	340	330	0.71	---	---	---	---	ND (0.10)
	08/07/13		320	280	1.80	---	---	---	---	ND (0.10)
	11/07/13		400	360	1.00	---	---	---	---	ND (0.10)
	02/05/14		330	340	1.90	---	---	---	---	0.072
05/07/14		320	320	2.30	400	12.0	8.52	8.20	ND (0.10)	
08/07/14		320	350	2.00	---	---	---	---	ND (0.10)	
SC-MW-03S	04/16/09		2.0	1.9	---	900	---	---	---	---
	08/27/09		4.4	5.3	---	---	---	---	---	---
	11/13/09		26.0	24.9	---	---	---	---	---	---
	02/01/10		8.3	7.9	---	---	---	---	---	---
	05/17/10		2.5	2.8	---	---	---	---	---	---
	08/05/10		2.8	2.5	10.0	---	---	---	---	---
	11/03/10		6.9	6.7	9.90	---	---	---	---	ND (0.02)
	02/04/11		2.0	2.0	11.0	---	---	---	---	ND (0.02)
	05/04/11		2.8	2.6	10.0	---	---	---	---	ND (0.10)
	08/02/11		2.1	2.1	9.80	---	---	---	---	ND (0.10)
	11/07/11		2.1	2.5	9.80	---	---	---	---	ND (0.50)
02/09/12		3.0	3.0	9.30	---	---	---	---	ND (0.10)	

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SC-MW-03S	05/03/12		3.7	3.6	8.70	---	---	---	---	0.25
	08/08/12		4.4	3.8	7.10	---	---	---	---	ND (0.10)
	11/07/12		2.4	2.6	9.40	---	---	---	---	ND (0.10)
	02/06/13		2.3	2.2	7.50	---	---	---	---	ND (0.10)
	05/03/13		3.7	3.9	8.80	---	---	---	---	ND (0.10)
	08/07/13		3.8	3.5	7.70	---	---	---	---	ND (0.10)
	11/07/13		2.1	2.4	7.80	---	---	---	---	ND (0.10)
	02/05/14		1.3	1.8	7.60	---	---	---	---	0.051
	05/07/14		1.3	1.5	7.70	580	11.7	ND (4.00)	8.40	ND (0.10)
	08/07/14		1.5	1.8	7.20	---	---	---	---	ND (0.10)
SC-MW-12D	04/16/09		ND (0.2)	ND (1.0)	---	326	---	---	---	---
	08/28/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	11/18/09		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/17/10		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	05/17/10	FD	ND (0.2)	ND (1.0)	---	---	---	---	---	---
	08/06/10		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	08/06/10	FD	ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	11/03/10		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.02)
	11/03/10	FD	ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.02)
	02/02/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.02)
	02/02/11	FD	ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.02)
	05/03/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	08/03/11		ND (0.2)	ND (1.0)	0.094	---	---	---	---	ND (0.10)
	11/08/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	02/07/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	05/03/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	0.087
	08/08/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	11/06/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	02/08/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
05/06/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-12D	08/06/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	11/06/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	02/04/14		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	0.067
	05/08/14		ND (0.2)	ND (1.0)	ND (0.05)	280	ND (3.00)	ND (4.00)	ND (0.67)	ND (0.10)
	08/04/14		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
SC-MW-12S	04/16/09		7.0	7.1	---	750	---	---	---	---
	08/28/09		17.9	21.7	---	---	---	---	---	---
	11/18/09		10.6	10.8	---	---	---	---	---	---
	02/02/10		13.5	14.1	---	---	---	---	---	---
	05/17/10		11.0	13.0	---	---	---	---	---	---
	08/06/10		22.7	20.2	14.0	---	---	---	---	---
	11/03/10		17.1	16.7	14.0	---	---	---	---	ND (0.02)
	02/02/11		40.7	39.9	14.0	---	---	---	---	ND (0.02)
	04/15/11		52.4	55.1	14.5J	---	---	---	---	0.116J
	05/03/11		85.0	92.0	13.0	---	---	---	---	ND (0.10)
	08/03/11		83.0	72.0	13.0	---	---	---	---	ND (0.10)
	11/08/11		84.0	78.0	13.0	---	---	---	---	ND (0.50)
	02/07/12		120	110	13.0	---	---	---	---	0.11
	02/07/12	FD	120	110	12.0	---	---	---	---	0.11
	05/03/12		150	160	12.0	---	---	---	---	0.13
	08/08/12		160	150	11.0	---	---	---	---	ND (0.10)
	11/06/12		200	190	11.0	---	---	---	---	ND (0.20)
	11/06/12	FD	200	210	11.0	---	---	---	---	ND (0.20)
	02/08/13		230	250	10.0	---	---	---	---	ND (0.20)
	05/06/13		250	280	10.0	---	---	---	---	ND (0.20)
08/06/13		290	250	10.0	---	---	---	---	ND (0.20)	
11/06/13		310	300	9.20	---	---	---	---	ND (0.50)	
02/04/14		330	330	9.20	---	---	---	---	0.11	
05/08/14		340	330	8.50	900	37.0	7.92	26.0	ND (0.10)	
08/04/14		330	340J	7.80	---	---	---	---	ND (0.10)	
SC-MW-21S	03/12/09		162J	158J	10.0J	777	---	---	---	---

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-21S	05/13/10		232	252	15.0	---	---	---	---	---
	08/16/10		224	197	13.0	---	---	---	---	---
	11/01/10		334	292	9.90	---	---	---	---	---
	11/01/10	FD	302	264	9.80	---	---	---	---	---
	02/01/11		465	434	11.0	---	---	---	---	---
	02/01/11	FD	458	468	11.0	---	---	---	---	---
	04/27/11		460	460	11.0	---	---	---	---	---
	07/27/11		200	210	14.0	---	---	---	---	---
	11/04/11		400	370	16.0	---	---	---	---	ND (0.50)
	01/25/12		300	310	18.0	---	---	---	---	---
	05/02/12		420	440	11.0	---	---	---	---	---
	07/27/12		250	260	5.70	---	---	---	---	---
	10/16/12		250	260	6.80	---	---	---	---	---
	01/15/13		220	230	5.40	---	---	---	---	---
	04/18/13		320	---	---	---	---	---	---	---
	07/19/13		430	---	11.0	---	---	---	---	---
	10/02/13		210	---	---	---	---	---	---	---
	01/08/14		380	---	---	---	---	---	---	---
	04/07/14		410	---	12.0	850	15.1	4.35J	10.0	---
	07/08/14		440	---	---	---	---	---	---	---
07/08/14	FD	420	---	---	---	---	---	---	---	
SC-MW-22S	03/31/09		75.4	78.2	9.90	790	---	---	---	---
	10/13/09		80.2	66.4	10.0J	---	---	---	---	---
	01/04/10		39.0	38.6	3.30	---	---	---	---	---
	02/02/10		ND (0.2)	ND (1.0)	ND (0.0)	---	---	---	---	---
	05/21/10		ND (0.2)	1.3	ND (0.05)	---	---	---	---	---
	08/16/10		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	11/01/10		ND (0.2)	1.4	ND (0.05)	---	---	---	---	---
	02/01/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	04/27/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	07/27/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-22S	01/25/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	01/25/12	FD	ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	07/27/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	01/15/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	04/18/13		ND (0.2)	---	---	---	---	---	---	---
	07/19/13		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	10/02/13		ND (0.2)	---	---	---	---	---	---	---
	01/08/14		ND (0.2)	---	---	---	---	---	---	---
	04/07/14		ND (0.2)	---	ND (0.05)	880	ND (3.00)	4.97J	ND (0.67)	---
	07/08/14		ND (0.2)	---	---	---	---	---	---	---
SC-MW-23S	03/31/09		0.98	ND (1.0)	16.0	910	---	---	---	---
	03/23/10		8.0	6.9	---	---	---	---	---	---
	02/01/11		10.3	9.6	11.0	---	---	---	---	---
	04/27/11		9.5	9.3	7.90	---	---	---	---	---
	07/27/11		0.75	1.1	0.22	---	---	---	---	---
	07/27/11	FD	0.77	1.1	0.24	---	---	---	---	---
	11/04/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	ND (0.10)
	01/25/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	07/27/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	01/15/13		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---
	04/18/13		ND (0.2)	---	---	---	---	---	---	---
	07/19/13		ND (0.2)	---	ND (0.10)	---	---	---	---	---
	10/02/13		ND (0.2)	---	---	---	---	---	---	---
	01/08/14		ND (0.2)	---	---	---	---	---	---	---
04/07/14		ND (0.2)	---	ND (0.05)	920	23.7	10.4J	13.0	---	
07/08/14		ND (0.2)	---	---	---	---	---	---	---	
SC-MW-26D	03/05/09		1,120J	1,010J	5.60	644	---	---	---	---
	10/13/09		1,200	1,110	5.90	---	---	---	---	---
	10/13/09	FD	1,200	1,090	5.80	---	---	---	---	---
	01/04/10		1,260	1,160	5.80	---	---	---	---	---
	02/02/10		1,050	970	6.60	---	---	---	---	---

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-26D	03/24/10		925	786	---	---	---	---	---	---
	05/21/10		1,020	920	6.90	---	---	---	---	---
	06/23/10		915	982	6.40	---	---	---	---	---
	06/23/10	FD	955	977	6.50	---	---	---	---	---
	08/16/10		1,300	1,170	5.00	---	---	---	---	---
	11/01/10		1,540	1,480	5.10	---	---	---	---	---
	01/31/11		1,160	1,180	5.60	---	---	---	---	---
	04/27/11		1,100	1,100	5.50	---	---	---	---	---
	11/04/11		1,100	1,000	5.80	---	---	---	---	ND (0.20)
	07/27/12		1,100	1,200	5.90	---	---	---	---	---
	01/15/13		1,100	1,100	6.10	---	---	---	---	---
	01/15/13	FD	1,000	1,000	6.30	---	---	---	---	---
	04/18/13		1,100	---	---	---	---	---	---	---
	08/02/13		1,100	---	5.80	---	---	---	---	---
	10/03/13		1,100	---	---	---	---	---	---	---
	01/08/14		1,100	---	---	---	---	---	---	---
	04/07/14		1,100	---	6.20	680	45.1	11.0J	29.0	---
07/18/14		1,000	---	---	---	---	---	---	---	
SC-MW-26S	03/05/09		3.4J	4.7J	11.0	972	---	---	---	---
	10/13/09		24.9	23.1	13.0J	---	---	---	---	---
	01/04/10		22.2	21.5	11.0J	---	---	---	---	---
	02/02/10		26.4	25.3	13.0	---	---	---	---	---
	03/24/10		25.9	21.9	---	---	---	---	---	---
	05/21/10		1.5	3.1	0.65	---	---	---	---	---
	08/16/10		5.1	7.7	3.90	---	---	---	---	---
	11/01/10		ND (0.2)	1.2	2.30	---	---	---	---	---
	01/31/11		1.4	2.4	4.10	---	---	---	---	---
	04/27/11		2.9	2.9	4.20	---	---	---	---	---
	07/27/11		0.77	1.4	2.90	---	---	---	---	---
11/04/11		0.34	ND (1.0)	1.10	---	---	---	---	ND (0.10)	
07/27/12		0.2	ND (1.0)	5.40	---	---	---	---	---	

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Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-26S	01/15/13		ND (0.2)	ND (1.0)	6.40	---	---	---	---	---
	04/18/13		ND (0.2)	---	---	---	---	---	---	---
	08/02/13		ND (0.2)	---	6.90	---	---	---	---	---
	10/03/13		0.28	---	---	---	---	---	---	---
	10/03/13	FD	ND (0.079)	---	---	---	---	---	---	---
	01/08/14		ND (0.2)	---	---	---	---	---	---	---
	04/07/14		ND (0.2)	---	1.80	830	27.4	8.10J	6.40	---
	07/18/14		ND (0.2)	---	---	---	---	---	---	---
SC-MW-32D	03/31/09		ND (0.2)	ND (1.0)	ND (0.10)	316	---	---	---	---
	03/31/09	FD	ND (0.2)	ND (1.0)	ND (0.10)	318	---	---	---	---
	01/04/10		ND (0.2)	ND (1.0)	ND (0.0)	---	---	---	---	---
	07/18/12		ND (0.06)	ND (1.0)	---	---	---	---	---	---
	10/15/12		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	02/08/13		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	07/02/13		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	01/08/14		ND (0.2)	ND (1.0)	---	---	---	---	---	---
SC-MW-32S	04/10/14		---	---	ND (0.05)	290	8.18J	4.41J	ND (0.67)	---
	07/09/14		ND (0.2)	ND (1.0)	---	---	---	---	---	---
	03/31/09		41.2	42.8	9.50	1,250	---	---	---	---
	10/13/09		66.2	58.4	9.70J	---	---	---	---	---
	01/04/10		57.2	55.6	8.80	---	---	---	---	---
	02/02/10		ND (0.2)	ND (1.0)	2.10	---	---	---	---	---
	05/21/10		ND (0.2)	ND (1.0)	0.64	---	---	---	---	---
	11/01/10		ND (0.2)	1.9	0.26	---	---	---	---	---
	11/01/10	FD	ND (0.2)	1.7	0.24	---	---	---	---	---
	01/31/11		ND (0.2)	1.5	0.15	---	---	---	---	---
	01/31/11	FD	ND (0.2)	1.4	0.16	---	---	---	---	---
04/27/11		ND (0.2)	1.6	0.065	---	---	---	---	---	
07/27/11		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---	
01/25/12		ND (0.2)	ND (1.0)	0.052	---	---	---	---	---	
07/27/12		ND (0.2)	ND (1.0)	ND (0.05)	---	---	---	---	---	

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Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-32S	07/27/12	FD	ND (0.2)	1.3	ND (0.05)	---	---	---	---	---
	01/15/13		ND (0.2)	1.7	ND (0.05)	---	---	---	---	---
	04/18/13		ND (0.2)	---	---	---	---	---	---	---
	07/02/13		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	10/21/13		ND (0.2)	---	---	---	---	---	---	---
	01/08/14		ND (0.2)	---	---	---	---	---	---	---
	04/10/14		---	---	---	---	8.08S	---	---	---
	04/10/14		ND (0.2)	---	ND (0.05)	840	12.6	ND (4.00)	11.0	---
	07/09/14		ND (0.2)	---	---	---	---	---	---	---
SC-MW-38D	03/05/09		170J	162J	8.70	738	---	---	---	---
	03/05/09	FD	174J	161J	8.80	732	---	---	---	---
	05/13/10		126	136	9.20	---	---	---	---	---
	08/16/10		144	121	8.70	---	---	---	---	---
	11/01/10		177	157	8.80	---	---	---	---	---
	01/31/11		122	123	9.60	---	---	---	---	---
	04/27/11		170	190	8.20	---	---	---	---	---
	07/27/11		180	190	7.70	---	---	---	---	---
	11/04/11		170	150	8.40	---	---	---	---	ND (0.50)
	11/04/11	FD	160	150	8.40	---	---	---	---	ND (0.10)
	07/27/12		140	150	8.60	---	---	---	---	---
	10/15/12		160	160	---	---	---	---	---	---
	01/24/13		68.3	68.7	---	---	---	---	---	---
	04/19/13		60.0	---	11.0	---	---	---	---	---
	07/19/13		72.0	70.0	11.0	---	---	---	---	---
	10/02/13		40.0	46.0	---	---	---	---	---	---
	01/09/14		65.0	59.0	---	---	---	---	---	---
	04/10/14		---	---	---	---	32.1S	---	---	---
	04/10/14		67.0	64.0	11.0	800	50.9	9.11J	39.0	---
	07/09/14		55.0	52.0	---	---	---	---	---	---
07/09/14	FD	55.0	50.0	---	---	---	---	---	---	
SC-MW-38S	03/05/09		4.3J	4.8J	10.0	835	---	---	---	---

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Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
SC-MW-38S	05/13/10		3.9	4.7	11.0	---	---	---	---	---
	08/16/10		4.6	4.5	11.0	---	---	---	---	---
	11/01/10		7.9J	6.0J	11.0	---	---	---	---	---
	01/31/11		3.9	4.3	11.0	---	---	---	---	---
	04/27/11		5.5	5.3	11.0	---	---	---	---	---
	07/27/11		4.6	5.6	9.80	---	---	---	---	---
	11/04/11		4.3	3.8	9.50	---	---	---	ND (0.50)	---
	07/27/12		3.2	3.3	8.40	---	---	---	---	---
	04/19/13		3.3	---	8.00	---	---	---	---	---
	07/19/13		2.1	---	7.40	---	---	---	---	---
	10/02/13		2.8	---	---	---	---	---	---	---
	01/09/14		4.7	---	---	---	---	---	---	---
	04/10/14		2.0	---	7.50	570	15.3	ND (4.00)	10.0	---
	07/09/14		2.4	---	---	---	---	---	---	---
X-04	04/17/14		12.0	---	9.30	---	---	30.0	---	
X-05	08/18/95		---	40.0	---	---	---	---	---	---
	10/05/95		---	50.0	---	---	---	---	---	---
	02/28/96		---	60.0	---	---	---	---	---	---
	04/03/96		---	60.0	---	---	---	---	---	---
	07/30/96		---	140	---	---	---	---	---	---
	10/02/96		---	170	---	---	---	---	---	---
	02/07/97		---	59.0	---	---	---	---	---	---
	04/09/97		---	36.0	---	---	---	---	---	---
	07/30/97		214	230	---	---	---	---	---	---
	10/07/97		---	200	---	---	---	---	---	---
	03/02/98		---	130	---	---	---	---	---	---
	05/20/98		---	110	---	---	---	---	---	---
	08/12/98		---	75.0	---	---	---	---	---	---
	11/12/99		---	20.0	---	---	---	---	---	---
03/09/01		---	31.0	---	---	---	---	---	---	
05/23/01		20.0	38.0	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
X-05	09/26/01		---	35.0	---	---	---	---	---	---
	12/06/01		---	29.0	---	---	---	---	---	---
	02/13/02		---	33.0	---	---	---	---	---	---
	05/22/02		37.0	29.2	---	---	---	---	---	---
	05/22/02	FD	39.0	30.8	---	---	---	---	---	---
	08/20/02		13.9	41.1	---	---	---	---	---	---
	11/11/02		25.0J	30.8	---	---	---	---	---	---
	02/17/03		27.9	31.2	---	---	---	---	---	---
	08/19/03		19.6	27.1	---	---	---	---	---	---
	02/19/04		ND (10.0)	38.7	---	---	---	---	---	---
	08/30/04		28.2	32.3	---	---	---	---	---	---
	02/22/07		15.5	14.0	---	---	---	---	---	---
	08/14/07		24.1	23.0	---	---	---	---	---	---
	02/20/08		19.5	22.8	---	---	---	---	---	---
	08/13/08		20.3	22.9	---	---	---	---	---	---
04/15/14		14.0	---	11.0	---	---	---	25.0	---	
X-06	02/24/94		---	560	---	---	---	---	---	---
	06/01/94		---	400	---	---	---	---	---	---
	08/10/94		---	350	---	---	---	---	---	---
	10/26/94		---	420	---	---	---	---	---	---
	02/09/95		---	270	---	---	---	---	---	---
	04/06/95		---	190	---	---	---	---	---	---
	08/15/95		---	140	---	---	---	---	---	---
	10/03/95		---	170	---	---	---	---	---	---
	02/28/96		---	120	---	---	---	---	---	---
	04/02/96		---	90.0	---	---	---	---	---	---
	07/30/96		---	90.0	---	---	---	---	---	---
	10/03/96		---	90.0	---	---	---	---	---	---
	02/07/97		63.0	71.0	---	---	---	---	---	---
	04/09/97		---	56.0	---	---	---	---	---	---
	07/30/97		54.0	60.0	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
X-06	10/08/97		58.0	66.0	---	---	---	---	---	---
	03/02/98		54.0	66.0	---	---	---	---	---	---
	05/19/98		45.0	47.0	---	---	---	---	---	---
	08/11/98		47.0	50.0	---	---	---	---	---	---
	11/16/98		53.0	51.0	---	---	---	---	---	---
	02/23/99		50.0	64.0	---	---	---	---	---	---
	05/25/99		58.0	50.0	---	---	---	---	---	---
	08/24/99		40.0	50.0	---	---	---	---	---	---
	11/11/99		190	210	---	---	---	---	---	---
	02/10/00		200	230	---	---	---	---	---	---
	05/03/00		52.0	50.0	---	---	---	---	---	---
	08/09/00		140	130	---	---	---	---	---	---
	11/08/00		170	180	---	---	---	---	---	---
	03/07/01		180	180	---	---	---	---	---	---
	05/22/01		208	200	---	---	---	---	---	---
	09/27/01		250	260	---	---	---	---	---	---
	12/05/01		270	270	---	---	---	---	---	---
	08/20/02		257	310	---	---	---	---	---	---
	11/11/02		257J	296	---	---	---	---	---	---
	02/17/03		277	246	---	---	---	---	---	---
08/13/03		235	270	---	---	---	---	---	---	
02/18/04		252	639	---	---	---	---	---	---	
08/30/04		169	193	---	---	---	---	---	---	
02/09/05		136	130	---	---	---	---	---	---	
04/14/08		102	94.7	5.69	665	---	---	---	---	
04/10/14		23.0	---	4.90	---	---	---	25.0	---	
X-09	11/12/99		---	510	---	---	---	---	---	---
	02/12/00		---	510	---	---	---	---	---	---
	08/10/00		---	510	---	---	---	---	---	---
	08/19/03		17.2	19.7	---	---	---	---	---	---
	02/20/04		21.9	23.2	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-09	08/27/04		15.0	18.2	---	---	---	---	---	---
	04/14/08		18.0	23.8	11.4	1,920	---	---	---	---
	04/29/14		96.0	---	6.60	---	---	---	35.0	---
X-10	02/24/94		---	170	---	---	---	---	---	---
	06/01/94		---	310	---	---	---	---	---	---
	08/10/94		---	130	---	---	---	---	---	---
	10/26/94		---	140	---	---	---	---	---	---
	02/09/95		---	---	11.0	676	---	---	---	---
	02/10/95		---	110	---	---	---	---	---	---
	04/06/95		---	80.0	---	---	---	---	---	---
	08/16/95		---	90.0	---	---	---	---	---	---
	10/04/95		---	80.0	---	---	---	---	---	---
	10/04/95	FD	---	80.0	---	---	---	---	---	---
	02/28/96		---	80.0	---	---	---	---	---	---
	04/02/96		---	70.0	---	---	---	---	---	---
	07/30/96		---	50.0	---	---	---	---	---	---
	10/03/96		---	800	---	---	---	---	---	---
	02/07/97		---	58.0	---	---	---	---	---	---
	04/09/97		---	74.0	---	---	---	---	---	---
	07/31/97		---	56.0	---	---	---	---	---	---
	08/21/97		---	46.0	41.0	---	---	---	---	---
	10/07/97		---	53.0	54.0	---	---	---	---	---
	03/03/98		---	80.0	77.0	---	---	---	---	---
	05/21/98		---	62.0	64.0	---	---	---	---	---
08/11/98		---	83.0	82.0	---	---	---	---	---	
11/17/98		---	43.0	36.0	---	---	---	---	---	
02/23/99		---	41.0	58.0	---	---	---	---	---	
05/26/99		---	40.0	50.0	---	---	---	---	---	
08/23/99		---	37.0	45.0	---	---	---	---	---	
11/11/99		---	519	560	---	---	---	---	---	
02/08/00		---	49.0	54.0	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-10	05/02/00		57.0	61.0	---	---	---	---	---	---
	08/10/00		34.0	32.0	---	---	---	---	---	---
	11/09/00		295	290	---	---	---	---	---	---
	03/08/01		23.0	24.0	---	---	---	---	---	---
	05/23/01		72.4	74.0	---	---	---	---	---	---
	09/26/01		33.0	34.0	---	---	---	---	---	---
	12/06/01		28.0	31.0	---	---	---	---	---	---
	08/18/03		14.8	19.3	---	---	---	---	---	---
	02/19/04		ND (10.0)	30.8	---	---	---	---	---	---
	08/27/04		10.6	15.4	---	---	---	---	---	---
	03/22/06		12.0	19.4	14.7	1,170	---	---	---	---
	02/22/07		10.6	15.0	---	---	---	---	---	---
	08/22/07		3.8	5.8	---	---	---	---	---	---
	02/20/08		5.9	6.0	---	---	---	---	---	---
	08/14/08		14.5	14.8	---	---	---	---	---	---
	11/01/10		15.8	16.6	---	---	---	---	---	---
	01/31/11		9.8	10.2	7.30	---	---	---	---	---
	04/26/11		20.0	20.0	10.0	---	---	---	---	---
	04/26/11	FD	20.0	21.0	11.0	---	---	---	---	---
	07/27/11		22.0	24.0	11.0	---	---	---	---	---
	11/11/11		9.8	9.5	8.20	---	---	---	---	ND (0.50)
	01/25/12		3.5	3.6	5.20	---	---	---	---	---
	05/02/12		6.4	6.0	5.70	---	---	---	---	---
	08/06/12		3.2	2.7	4.70	---	---	---	---	---
	08/06/12	FD	3.3	2.8	4.70	---	---	---	---	---
	10/18/12		5.0	5.1	6.10	---	---	---	---	---
	01/15/13		30.0	32.0	8.50	---	---	---	---	---
04/18/13		55.0	---	9.00	---	---	---	---	---	
07/17/13		69.0	---	9.70	---	---	---	---	---	
10/03/13		50.0	---	---	---	---	---	---	---	
01/13/14		34.0	---	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-10	04/09/14		42.0	---	8.30	1,400	53.5	12.5	62.0J	---
	04/09/14		---	---	---	---	41.6JS	---	---	---
	07/15/14		42.0	---	---	---	---	---	---	ND (0.20)
X-11	02/26/96		---	780	---	---	---	---	---	---
	10/03/96		---	180	---	---	---	---	---	---
	02/07/97		340	2,800	---	---	---	---	---	---
	04/09/97		---	150	---	---	---	---	---	---
	10/07/97		441	540	---	---	---	---	---	---
	10/07/97	FD	---	540	---	---	---	---	---	---
	03/03/98		421	550	---	---	---	---	---	---
	03/03/98	FD	---	550	---	---	---	---	---	---
	05/21/98		120	140	---	---	---	---	---	---
	05/21/98	FD	---	140	---	---	---	---	---	---
	08/11/98		338	340	---	---	---	---	---	---
	08/11/98	FD	---	350	---	---	---	---	---	---
	11/17/98		359	330	---	---	---	---	---	---
	11/17/98	FD	355	330	---	---	---	---	---	---
	02/23/99		278	320	---	---	---	---	---	---
	02/23/99	FD	---	320	---	---	---	---	---	---
	05/26/99		240	270	---	---	---	---	---	---
	05/26/99	FD	---	260	---	---	---	---	---	---
	08/24/99		190	240	---	---	---	---	---	---
	08/24/99	FD	---	240	---	---	---	---	---	---
11/10/99		225	240	---	---	---	---	---	---	
11/10/99	FD	---	250	---	---	---	---	---	---	
02/08/00		160	180	---	---	---	---	---	---	
02/08/00	FD	---	200	---	---	---	---	---	---	
05/02/00		160	160	---	---	---	---	---	---	
05/02/00	FD	---	160	---	---	---	---	---	---	
08/10/00		150	140	---	---	---	---	---	---	
08/10/00	FD	---	150	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-11	11/08/00		160	170	---	---	---	---	---	---
	11/08/00	FD	170	170	---	---	---	---	---	---
	03/08/01		120	110	---	---	---	---	---	---
	03/08/01	FD	---	110	---	---	---	---	---	---
	05/23/01		124	130	---	---	---	---	---	---
	05/23/01	FD	125	120	---	---	---	---	---	---
	09/26/01		130	200	---	---	---	---	---	---
	09/26/01	FD	130	200	---	---	---	---	---	---
	12/05/01		130	200	---	---	---	---	---	---
	12/05/01	FD	130	190	---	---	---	---	---	---
	08/14/03		ND (10.0)	3.9	---	---	---	---	---	---
	09/25/08		99.7	378	10.6	1,340	---	---	---	---
	10/13/09		97.0	85.8	10.0J	---	---	---	---	---
	01/04/10		100	98.0	9.80	---	---	---	---	---
	02/02/10		98.1	96.6	9.90J	---	---	---	---	---
	02/02/10	FD	97.9	96.6	10.0J	---	---	---	---	---
	03/23/10		85.0	73.1	---	---	---	---	---	---
	05/21/10		93.7	98.4	8.60	---	---	---	---	---
	05/21/10	FD	95.6	101	8.60	---	---	---	---	---
	06/22/10		79.6	83.5	7.70	---	---	---	---	---
	08/16/10		99.8	90.6	6.70	---	---	---	---	---
	08/16/10	FD	99.2	90.4	6.70	---	---	---	---	---
	11/01/10		62.8	60.2	4.60	---	---	---	---	---
	01/31/11		87.4	88.3	4.00	---	---	---	---	---
	04/26/11		34.0	37.0	2.40	---	---	---	---	---
	07/27/11		50.0	60.0	1.50	---	---	---	---	---
	11/11/11		38.0	38.0	1.30	---	---	---	---	ND (0.10)
01/25/12		14.0	16.0	0.77	---	---	---	---	---	
05/02/12		19.0	23.0	1.10	---	---	---	---	---	
08/06/12		0.7	2.1	0.25	---	---	---	---	---	
10/18/12		0.24	2.6	0.16	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-11	01/15/13		0.54	4.0	0.16	---	---	---	---	---
	04/18/13		ND (0.2)	---	---	---	---	---	---	---
	07/17/13		ND (0.2)	---	0.064	---	---	---	---	---
	10/03/13		0.23	---	---	---	---	---	---	---
	01/13/14		0.7	---	---	---	---	---	---	---
	04/09/14		9.3	---	ND (0.25)	930	30.5	9.12	24.0	---
	04/09/14		---	---	---	---	19.0JS	---	---	---
	07/15/14		0.44	---	---	---	---	---	---	---
X-12	02/27/96		---	340	---	---	---	---	---	---
	04/02/96		---	390	---	---	---	---	---	---
	10/03/96		---	360	---	---	---	---	---	---
	02/06/97		---	190	---	---	---	---	---	---
	04/09/97		---	170	---	---	---	---	---	---
	03/03/98		320	380	---	---	---	---	---	---
	05/21/98		320	370	---	---	---	---	---	---
	08/11/98		170	170	---	---	---	---	---	---
	11/17/98		180	160	---	---	---	---	---	---
	05/26/99		120	130	---	---	---	---	---	---
	08/24/99		100	150	---	---	---	---	---	---
	11/10/99		190	200	---	---	---	---	---	---
	02/08/00		180	200	---	---	---	---	---	---
	05/02/00		140	140	---	---	---	---	---	---
	08/10/00		130	120	---	---	---	---	---	---
	11/08/00		250	270	---	---	---	---	---	---
	03/08/01		335	310	---	---	---	---	---	---
	05/23/01		89.2	94.0	---	---	---	---	---	---
	09/26/01		250	270	---	---	---	---	---	---
	12/06/01		240	220	---	---	---	---	---	---
	08/14/03		311	372	---	---	---	---	---	---
02/17/04		360	536	---	---	---	---	---	---	
08/27/04		366	597	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
X-12	02/10/05		343	319	---	---	---	---	---	---
	09/25/08		260	262	11.6	985	---	---	---	---
	06/23/10		247	247	11.0	---	---	---	---	---
	07/27/11		170	190	10.0	---	---	---	---	---
	11/11/11		180	170	9.60	---	---	---	---	ND (0.50)
	11/11/11	FD	180	170	9.70	---	---	---	---	ND (0.10)
	01/25/12		190	190	9.20	---	---	---	---	---
	05/02/12		150	160	9.20	---	---	---	---	---
	08/06/12		180	160	8.50	---	---	---	---	---
	10/18/12		190	190	8.40	---	---	---	---	---
	10/18/12	FD	180	180	8.50	---	---	---	---	---
	01/15/13		260	260	8.60	---	---	---	---	---
	04/18/13		200	---	---	---	---	---	---	---
	07/17/13		300	---	8.10	---	---	---	---	---
	10/03/13		260	---	---	---	---	---	---	---
	01/13/14		370	---	---	---	---	---	---	---
	04/23/14		290	---	6.00	1,100	51.2J	5.75	34.0	---
	07/15/14		480	---	---	---	---	---	---	---
	07/15/14	FD	470	---	---	---	---	---	---	---
	X-13	02/27/96		---	70.0	---	---	---	---	---
10/03/96			---	140	---	---	---	---	---	---
02/06/97			---	650	---	---	---	---	---	---
04/09/97			---	570	---	---	---	---	---	---
07/30/97			97.0	110	---	---	---	---	---	---
10/07/97			91.0	100	---	---	---	---	---	---
03/03/98			100	110	---	---	---	---	---	---
05/21/98			74.0	120	---	---	---	---	---	---
08/11/98			371	350	---	---	---	---	---	---
11/17/98			351	320	---	---	---	---	---	---
02/23/99			306	390	---	---	---	---	---	---
05/26/99		74.0	90.0	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
X-13	08/24/99		62.0	140	---	---	---	---	---	---
	11/10/99		31.0	37.0	---	---	---	---	---	---
	05/02/00		250	250	---	---	---	---	---	---
	08/10/00		236	220	---	---	---	---	---	---
	11/08/00		91.0	96.0	---	---	---	---	---	---
	03/07/01		95.0	94.0	---	---	---	---	---	---
	05/23/01		387	400	---	---	---	---	---	---
	09/26/01		42.0	90.0	---	---	---	---	---	---
	12/06/01		32.0	41.0	---	---	---	---	---	---
	02/11/02		41.0	57.6	---	---	---	---	---	---
	05/20/02		43.0	35.2	---	---	---	---	---	---
	08/21/02		21.5	39.1	---	---	---	---	---	---
	11/12/02		14.6	36.1	---	---	---	---	---	---
	02/18/03		14.9	19.5	---	---	---	---	---	---
	08/18/03		20.8	26.7	---	---	---	---	---	---
	02/19/04		ND (10.0)	7.7	---	---	---	---	---	---
	08/27/04		ND (10.0)	4.6	---	---	---	---	---	---
	09/25/08		22.3	27.5	13.3	1,360	---	---	---	---
	01/25/12		290	300	2.80	---	---	---	---	---
	05/02/12		490	520	2.30	---	---	---	---	---
	08/06/12		570	590	2.90	---	---	---	---	---
	10/18/12		230	230	1.30	---	---	---	---	---
	01/15/13		870	860	6.70	---	---	---	---	---
	04/18/13		810	---	6.80	---	---	---	---	---
	07/17/13		810	---	6.40	---	---	---	---	---
	08/19/13		642	---	---	---	---	---	---	---
	08/21/13		320	---	---	---	---	---	---	---
	08/22/13		298	---	---	---	---	---	---	---
	10/03/13		870	---	---	---	---	---	---	---
	10/03/13	FD	870	---	---	---	---	---	---	---
	01/13/14		760	---	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-13	04/09/14		720	---	7.10	740	52.1	8.09	35.0	---
	07/15/14		690	---	---	---	---	---	---	---
X-16	02/27/96		---	460	---	---	---	---	---	---
	04/02/96		---	460	---	---	---	---	---	---
	10/03/96		---	320	---	---	---	---	---	---
	02/06/97		---	60.0	---	---	---	---	---	---
	04/09/97		---	58.0	---	---	---	---	---	---
	04/09/97	FD	---	48.0	---	---	---	---	---	---
	07/30/97		ND (10.0)	ND (10.0)	---	---	---	---	---	---
	10/08/97		ND (10.0)	ND (10.0)	---	---	---	---	---	---
	03/02/98		64.0	57.0	---	---	---	---	---	---
	05/20/98		ND (10.0)	19.0J	---	---	---	---	---	---
	08/12/98		50.0	47.0	---	---	---	---	---	---
	11/18/98		39.0	38.0	---	---	---	---	---	---
	02/23/99		23.0	36.0	---	---	---	---	---	---
	05/26/99		32.0	38.0	---	---	---	---	---	---
	08/23/99		20.0	33.0	---	---	---	---	---	---
	11/10/99		95.0	100	---	---	---	---	---	---
	02/08/00		31.0	34.0	---	---	---	---	---	---
	05/02/00		31.0	31.0	---	---	---	---	---	---
	08/10/00		28.0	29.0	---	---	---	---	---	---
	11/09/00		100	96.0	---	---	---	---	---	---
03/08/01		27.0	22.0	---	---	---	---	---	---	
05/23/01		25.5	25.0	---	---	---	---	---	---	
09/26/01		81.0	100	---	---	---	---	---	---	
12/13/01		71.0	84.0	---	---	---	---	---	---	
05/21/02		114	106	---	---	---	---	---	---	
08/21/02		91.5	108	---	---	---	---	---	---	
11/12/02		81.3	82.7	---	---	---	---	---	---	
02/18/03		90.6	92.0	---	---	---	---	---	---	
02/18/03	FD	89.6	92.3	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
X-16	06/24/03		63.8	67.9	---	---	---	---	---	---
	08/14/03		95.5	94.3	---	---	---	---	---	---
	08/14/03	FD	97.3	91.3	---	---	---	---	---	---
	10/29/03		71.8	78.8	---	---	---	---	---	---
	12/02/03		76.0	85.6J	---	---	---	---	---	---
	02/20/04		116J	109	---	---	---	---	---	---
	02/20/04	FD	124J	109	---	---	---	---	---	---
	04/27/04		107	98.6	---	---	---	---	---	---
	06/15/04		99.3	103	---	---	---	---	---	---
	08/27/04		99.1J	90.0	---	---	---	---	---	---
	08/27/04	FD	78.9J	100	---	---	---	---	---	---
	10/15/04		91.9	82.0	---	---	---	---	---	---
	12/08/04		110	117	---	---	---	---	---	---
	09/25/08		111	132	11.0	865	---	---	---	---
	09/25/08	FD	112	136	11.0	870	---	---	---	---
	06/22/10		173	168	10.0	---	---	---	---	---
	11/01/10		185	171	9.90	---	---	---	---	---
	01/31/11		92.2	94.6	7.40	---	---	---	---	---
	04/26/11		56.0	61.0	6.90	---	---	---	---	---
	07/27/11		46.0	55.0	6.30	---	---	---	---	---
	11/11/11		42.0	44.0	5.20	---	---	---	---	ND (0.20)
	01/25/12		33.0	35.0	4.70	---	---	---	---	---
	05/02/12		34.0	34.0	4.40	---	---	---	---	---
	08/06/12		32.0	28.0	3.90	---	---	---	---	---
	10/18/12		26.0	28.0	3.70	---	---	---	---	---
	01/15/13		24.0	27.0	4.50	---	---	---	---	---
	01/15/13	FD	25.0	27.0	4.60	---	---	---	---	---
04/18/13		17.0	---	---	---	---	---	---	---	
04/18/13	FD	17.0	---	---	---	---	---	---	---	
07/17/13		17.0	---	4.70	---	---	---	---	---	
10/03/13		20.0	---	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
X-16	01/13/14		23.0	---	---	---	---	---	---	---
	04/09/14		12.0	---	3.10	1,000	33.6	11.9	32.0	---
	04/09/14		---	---	---	---	20.3JS	---	---	---
	07/15/14		15.0	---	---	---	---	---	---	---

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
Additional Wells Sampled										
CA-MW-106D	04/19/07		79.6	79.8	10.4	1,290	---	---	---	ND (0.50)
	06/14/07		32.8J	73.0	---	---	---	---	---	---
	11/26/07		66.0	71.4	---	---	---	---	---	---
	11/27/07		---	---	11.0	---	---	---	---	---
	12/19/07		59.8	---	---	---	---	---	---	---
	12/27/07		67.4	---	---	---	---	---	---	---
	12/27/07	FD	69.6	70.0	10.5	---	---	---	---	ND (0.50)
	01/29/08		69.7	---	---	---	---	---	---	---
	02/25/08		58.2	---	---	---	---	---	---	---
	03/17/08		55.7	---	---	---	---	---	---	---
	04/09/08		61.7	---	---	---	---	---	---	---
	05/21/08		62.5	---	---	---	---	---	---	---
	06/04/08		64.1	---	---	---	---	---	---	---
	07/08/08		71.3	---	---	---	---	---	---	---
	08/04/08		83.2	---	---	---	---	---	---	---
	08/26/09		68.7	71.0	11.0J	---	---	---	---	---
	02/18/10		73.8	65.0	11.0J	---	---	---	---	---
	08/18/10		66.0	61.5	12.0	---	---	---	---	---
	02/01/11		54.4	51.3	12.0	---	---	---	---	---
	07/26/11		48.0	47.0	12.0	---	---	---	---	---
	01/18/12		44.0	44.0	13.0	---	---	---	---	---
	01/18/12	FD	45.0	46.0	13.0	---	---	---	---	---
	08/09/12		38.0	36.0	12.0	---	---	---	---	---
	08/09/12	FD	38.0	36.0	12.0	---	---	---	---	---
	01/09/13		33.0	31.0	8.30	---	---	---	---	---
	05/02/13		4.6	---	4.90	---	---	---	---	---
	07/18/13		ND (0.2)	---	1.20	---	---	---	---	---
	10/02/13		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	01/06/14		ND (0.2)	---	ND (0.05)	---	---	---	---	---
	04/09/14		ND (0.2)	---	ND (0.05)	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
CA-MW-106D	07/22/14		ND (0.2)	---	0.06	---	---	---	---	ND (0.10)
CA-MW-109D	02/16/12		45.0	44.0	---	---	---	---	---	---
	04/30/12		47.0	45.0	12.0	---	---	---	---	---
	08/06/12		30.0	28.0	12.0	---	---	---	---	---
	01/09/13		350	360	6.80	---	---	---	---	---
	05/02/13		160	---	6.20	---	---	---	---	---
	07/18/13		330	---	5.80	---	---	---	---	---
	10/04/13		110	---	6.50	---	---	---	---	---
	10/04/13	FD	120	---	6.60	---	---	---	---	---
	01/09/14		180	---	4.40	---	---	---	---	---
	04/09/14		100	---	4.60	---	---	---	---	---
	07/18/14		96.0	---	4.20	---	---	---	---	ND (0.10)
CA-MW-109S	02/16/12		11.0	11.0	---	---	---	---	---	---
	04/30/12		19.0	18.0	11.0	---	---	---	---	---
	04/30/12	FD	19.0	18.0	9.10	---	---	---	---	---
	08/06/12		14.0	13.0	19.0	---	---	---	---	---
	10/19/12		15.0	14.0	18.0	---	---	---	---	---
	01/09/13		19.0	19.0	16.0	---	---	---	---	---
	04/18/13		4.9	---	14.0	---	---	---	---	---
	04/18/13	FD	4.9	---	12.0	---	---	---	---	---
	07/18/13		2.8	---	14.0	---	---	---	---	---
	10/04/13		0.66	---	12.0	---	---	---	---	---
	01/09/14		0.29	---	5.10	---	---	---	---	---
	04/09/14		2.7	---	14.0	---	---	---	---	---
	07/18/14		0.44	---	5.20	---	---	---	---	ND (0.10)
CA-RW-16	02/22/12		320	340	---	---	---	---	---	---
	02/07/13		390	---	9.50	---	---	---	---	---
	04/19/13		220	---	9.50	---	---	---	---	---
	07/19/13		230	---	9.10	---	---	---	---	---
	07/19/13	FD	230	---	9.20	---	---	---	---	---
	10/04/13		250	---	9.30	---	---	---	---	---

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Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L	Orthophosphate mg/L
CA-RW-16	01/13/14		290	---	9.80	---	---	---	---	---
	04/11/14		380	---	8.60	---	---	---	---	---
	07/17/14		150	---	7.40	---	---	---	---	ND (0.10)
SA-MW-26D	03/21/11		0.44	ND (1.1)	---	---	---	---	---	---
	04/27/11		0.24	ND (1.0)	0.45	---	---	---	---	---
	09/06/11		0.58	ND (1.0)	0.60	---	---	---	---	---
	01/27/12		0.68	1.2	---	---	---	---	---	---
	01/27/12	FD	0.69	1.2	---	---	---	---	---	---
	04/26/12		1.1	1.4	---	---	---	---	---	---
	07/31/12		0.86	1.6	---	---	---	---	---	---
	07/31/12	FD	0.86	1.8	---	---	---	---	---	---
	10/15/12		1.1	1.1	---	---	---	---	---	---
	01/14/13		1.0	1.2	---	---	---	---	---	---
	04/18/13		0.99	1.2	---	---	---	---	---	---
	07/17/13		1.2	1.7	---	---	---	---	---	---
	10/07/13		0.94	1.1	---	---	---	---	---	---
	01/08/14		1.0	1.7	---	---	---	---	---	---
	04/10/14		1.2	1.2	---	---	---	---	---	---
07/15/14		0.94	1.1	0.60	---	---	---	---	0.12	
SA-MW-26S	03/21/11		384	340	---	---	---	---	---	---
	04/27/11		330	340	3.10	---	---	---	---	---
	04/27/11	FD	330	330	3.10	---	---	---	---	---
	01/27/12		320	323	---	---	---	---	---	---
	04/26/12		312	300	---	---	---	---	---	---
	07/31/12		309	323	---	---	---	---	---	---
	10/15/12		335	330	---	---	---	---	---	---
	01/14/13		320	310	---	---	---	---	---	---
	04/18/13		340	320	---	---	---	---	---	---
	04/18/13	FD	340	340	---	---	---	---	---	---
	07/17/13		360	370	---	---	---	---	---	---
10/07/13		360	350	---	---	---	---	---	---	

Table E-1

Historical Analytical Results for Groundwater Monitoring Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium	Total Dissolved Chromium	Nitrate as Nitrogen	Total Dissolved Solids	Gross Alpha	Gross Beta	Uranium, Dissolved	Orthophosphate
			µg/L	µg/L	mg/L	mg/L	pCi/L	pCi/L	pCi/L	mg/L
SA-MW-26S	01/08/14		380	390	---	---	---	---	---	---
	04/10/14		370	390	---	---	---	---	---	---
	07/15/14		360	380	4.30	---	---	---	---	ND (0.10)

Notes:

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

- a Ranch ATU is physically located in both OU1 and OU2. However, irrigation water for the Ranch ATU is located in OU2. Therefore, the Ranch ATU is considered to be in OU2.

-- = not analyzed

µg/L = micrograms per liter

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

OU = Operable Unit

mg/L = milligrams per liter

ND (x.x) = not detected at or above the reporting limit shown

Appendix F
Domestic Well Information

TABLE F-1

Survey Findings for Private Supply Wells Not Sampled During the Third Quarter of 2014
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Well Type	Well Status	Well Survey Findings
EIR Mitigation Measure WTR-MM-2a			
01-02	DOM	INACT	Unoccupied in Third Quarter 2014.
01-17	DOM	ACT	Property observed to be unoccupied on July 1, 2014.
14-07	DOM	INACT	Owner refused future sampling in December 2013.
14-15	DOM	ACT	Owner refused future sampling in December 2013.
15-04	DOM	INACT	Unoccupied in Third Quarter 2014.
15-07	DOM	INACT	Inactive, based on Third Quarter 2014 observations.
22-04	DOM	INACT	Unoccupied in Third Quarter 2014.
22-09	DOM	ACT	Owner requested contact through legal counsel.
22-105	DOM	INACT	Well is broken, based on conversation with tenant on July 9, 2014.
22-106	DOM	INACT	Unoccupied in Third Quarter 2014.
22-15	DOM	ACT	Owner requested contact through legal counsel.
22-26	DOM	ACT	Owner refused retrofit in January 2011.
22-44	DOM	INACT	Unoccupied in Third Quarter 2014.
22-59	DOM	ACT	Owner requested contact through legal counsel.
22-60	DOM	ACT	Owner requested contact through legal counsel.
22-67	DOM	INACT	Unable to coordinate with owner.
22-68	DOM	ACT	Unoccupied in Third Quarter 2014.
22-70	DOM	ACT	Owner requested contact through legal counsel.
22-72	DOM	INACT	Owner refused retrofit in April 2014.
22-74	DOM	ACT	Owner requested contact through legal counsel.
22-78	DOM	ACT	Owner requested contact through legal counsel.
22-79	DOM	ACT	Owner requested contact through legal counsel.
23-27	DOM	ACT	Owner requested contact through legal counsel.
24-03	DOM	ACT	Well verified inactive on July 10, 2014.
24-05	DOM	INACT	Unoccupied in Third Quarter 2014.
24-06	DOM	INACT	Unoccupied in Third Quarter 2014.
25-18	DOM	ACT	Unable to coordinate with owner.
27-08	DOM	INACT	Pump is broken, per April 2013 discussion
27-38	DOM	ACT	Unable to coordinate with point of contact.
27-39	DOM	ACT	Unable to coordinate with point of contact.
27-40	DOM	ACT	Unable to coordinate with point of contact.
27-41	DOM	ACT	Owner refused retrofit in January 2011.
28-05	DOM	INACT	Unoccupied in Third Quarter 2014.
28-06	DOM	ACT	Owner requested contact through legal counsel.
28-08	DOM	ACT	Owner requested contact through legal counsel.
28-19	DOM	ACT	Owner refused future sampling in July 2014.
28-22	DOM	ACT	Owner requested contact through legal counsel.
28-28	DOM	ACT	Owner granted permission but unable to coordinate with tenant to gain access to property.
28-31	DOM	INACT	Unoccupied in Third Quarter 2014.
28-42	DOM	ACT	Refused future sampling in April 2013.
28-62	DOM	ACT	Unable to coordinate with owner.
28-69	DOM	INACT	Unoccupied in Third Quarter 2014.
28-75	DOM	INACT	Unable to coordinate with owner.
28-76	DOM	ACT	Owner requested contact through legal counsel.
28-81	DOM	ACT	Owner requested contact through legal counsel.
28-82	DOM	ACT	Owner requested contact through legal counsel.
30E-11	DOM	INACT	Unoccupied in Third Quarter 2014.
34-48	DOM	INACT	Unoccupied in Third Quarter 2014.
34-53	DOM	INACT	Inactive, based on Third Quarter 2014 observations.
36-42	DOM	ACT	Unable to retrofit due to poor condition of piping.
BGS-05	DOM	INACT	Inactive, based on Third Quarter 2014 observations.
EIR Mitigation Measure WTR-MM-2b			
14-07	DOM	INACT	Owner approval to sample for EIR analytes was not received.
14-15	DOM	ACT	Owner approval to sample for EIR analytes was not received.
15-04	DOM	INACT	Owner approval to sample for EIR analytes was not received.
15-05	DOM	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed.
15-06	DOM	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed.
15-07	DOM	INACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed. Inactive well, based on 3Q14 observations.
15-08	DOM	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed.
15-09	DOM	INACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed. Inactive well, based on 3Q14 observations.
15-12	DOM	INACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed. Inactive well, based on 3Q14 observations.
15-14	DOM	INACT	Owner approval to sample for EIR analytes was not received.
15-17	AGR	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed. Agricultural well that cannot be retrofitted at wellhead for sampling.
22-04	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-09	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-105	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-106	DOM	INACT	Unoccupied property and inactive well, based on 3Q14 observations.
22-15	DOM	ACT	Owner approval to sample for EIR analytes was not received.

TABLE F-1

Survey Findings for Private Supply Wells Not Sampled During the Third Quarter of 2014
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Well Type	Well Status	Well Survey Findings
22-22	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-23	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-26	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-44	DOM	INACT	Unoccupied and inactive well in 3Q14.
22-48	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-59	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-60	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-63	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-67	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-68	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-70	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-72	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-74	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-78	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-79	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-83	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-88	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-90	DOM	ACT	Owner approval to sample for EIR analytes was not received.
22-95	DOM	INACT	Owner approval to sample for EIR analytes was not received.
22-96	DOM	INACT	Owner approval to sample for EIR analytes was not received.
23-07	DOM	ACT	Owner approval to sample for EIR analytes was not received.
23-27	DOM	ACT	Owner approval to sample for EIR analytes was not received.
24-03	DOM	ACT	Owner approval to sample for EIR analytes was not received.
24-05	DOM	INACT	Owner approval to sample for EIR analytes was not received.
24-06	DOM	INACT	Unoccupied property and inactive well, based on 3Q14 observations.
25-16	DOM	INACT	Owner approval to sample for EIR analytes was not received.
25-18	DOM	ACT	Owner approval to sample for EIR analytes was not received.
27-08	DOM	INACT	Inactive well (pump is broken).
27-17	AGR	INACT	Owner approval to sample for EIR analytes was not received.
27-38	DOM	ACT	Unable to coordinate with point of contact.
27-39	DOM	ACT	Unable to coordinate with point of contact.
27-40	DOM	ACT	Unable to coordinate with point of contact.
27-41	DOM	ACT	Owner approval to sample for EIR analytes was not received.
27-48	DOM	ACT	Owner approval to sample for EIR analytes was not received.
27-49	DOM	ACT	Owner approval to sample for EIR analytes was not received.
34-53	DOM	INACT	Owner approval to sample for EIR analytes was not received.
34-63	DOM	INACT	Owner approval to sample for EIR analytes was not received.
36-17	DOM	ACT	Owner approval to sample for EIR analytes was not received.
36-26	DOM	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed.
36-42	DOM	ACT	Unable to retrofit due to poor condition of piping.
36-43	DOM	ACT	Owner approval to sample for EIR analytes was not received.
BGS-05	DOM	INACT	Owner approval to sample for EIR analytes was not received.
BGS-46	DOM	ACT	Received approval from owner to sample for EIR analytes after the quarterly event at this well was completed.

LOCATION TYPE CODE:

AGR: agricultural well

DOM: domestic well

STATUS CODE:

ACT: Active well

INACT: Inactive well. Well is not currently in use but could be made operational after minor testing/work.

TABLE F-2

Domestic and Agricultural Wells On Properties Purchased by PG&E During Reporting Period
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well Location*	Purchase Date
22-53	August 8, 2014
22-55	September 26, 2014
22-65	September 10, 2014
28-58	July 9, 2014
28-65	August 15, 2014
28-74	August 14, 2014
28-87	July 9, 2014
34-62	August 22, 2014
36-25	September 18, 2014

NOTES:

*Monitoring required by mitigation measures WTR-MM2a, WTR-MM2b, and WTR-MM2c in the *Final Environmental Impact Report* (ICF 2013) is no longer required for these wells.

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
01-01A	01/04/11		0.53	ND (1.0)	---	---	---	---	---
	08/18/11		0.64	1.1	---	---	---	---	---
	11/30/11		0.51	1.0	---	---	---	---	---
	01/04/12		0.47	ND (1.0)	---	---	---	---	---
	04/09/12		0.56	ND (1.0)	---	---	---	---	---
	07/17/12		0.59	ND (1.0)	---	---	---	---	---
	10/11/12		0.52	ND (1.0)	---	---	---	---	---
	01/17/13		0.5	ND (1.0)	---	---	---	---	---
	04/02/13		0.62	ND (1.0)	---	---	---	---	---
	04/11/13		0.55	ND (1.0)	8.50	520	13.6	21.9	11.6
	07/01/13		0.8	ND (1.0)	---	---	---	---	---
	10/01/13		0.49	ND (1.0)	---	---	---	---	---
	01/07/14		0.48	ND (1.0)	---	---	---	---	---
	04/01/14		0.58	ND (1.0)	---	---	---	---	---
	07/15/14		0.94	1.0	---	---	---	---	---
01-02	02/23/94		---	ND (10.0)	---	---	---	---	---
	06/01/94		---	ND (10.0)	---	---	---	---	---
	08/11/94		---	ND (10.0)	---	---	---	---	---
	10/27/94		---	ND (10.0)	---	---	---	---	---
	10/27/94	FD	---	ND (10.0)	---	---	---	---	---
	02/08/95		---	ND (8.0)	---	---	---	---	---
	04/05/95		---	ND (10.0)	---	---	---	---	---
	08/17/95		---	ND (10.0)	---	---	---	---	---
	10/05/95		---	ND (10.0)	---	---	---	---	---
	02/29/96		---	ND (10.0)	---	---	---	---	---
	04/03/96		---	ND (10.0)	---	---	---	---	---
	07/31/96		---	ND (10.0)	---	---	---	---	---
	10/03/96		---	ND (10.0)	---	---	---	---	---
	02/06/97		---	ND (2.0)	---	---	---	---	---
	04/10/97		---	ND (10.0)	---	---	---	---	---
07/31/97		---	ND (10.0)	---	---	---	---	---	

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	11/20/98		---	ND (10.0)	---	---	---	---	---
	11/12/99		ND (10.0)	ND (10.0)	---	---	---	---	---
	08/10/00		ND (10.0)	ND (10.0)	---	---	---	---	---
	05/24/01		ND (10.0)	ND (2.5)	---	---	---	---	---
	09/28/01		ND (10.0)	ND (1.0)	---	---	---	---	---
	12/06/01		ND (10.0)	2.3J	---	---	---	---	---
	05/12/02		0.55	2.1	---	---	---	---	---
	05/22/02		ND (0.2)	ND (1.0)	---	---	---	---	---
	08/15/02		0.21	2.3	---	---	---	---	---
	11/14/02		ND (0.2)	ND (1.0)	---	---	---	---	---
	02/21/03		ND (0.2)	2.2	---	---	---	---	---
	08/15/03		ND (0.2)	3.7	---	---	---	---	---
	10/29/03		ND (0.2)	5.0	---	---	---	---	---
	02/17/04		ND (0.2)	2.7	---	---	---	---	---
	01/17/06		0.39	1.5	22.0	1,090	---	---	---
	02/21/07		0.58	ND (1.0)	---	---	---	---	---
	06/19/07		0.66	ND (1.0)	---	---	---	---	---
	06/19/07	FD	0.63	ND (1.0)	---	---	---	---	---
	08/16/07		0.59	ND (1.0)	---	---	---	---	---
	10/17/07		0.67	ND (1.0)	---	---	---	---	---
	10/17/07	FD	0.66	ND (1.0)	---	---	---	---	---
	12/04/07		0.64	ND (1.0)	---	---	---	---	---
	12/04/07	FD	0.64	ND (1.0)	---	---	---	---	---
	02/12/08		0.65	ND (1.0)	---	---	---	---	---
	04/08/08		0.64	ND (1.0)	---	---	---	---	---
	06/10/08		0.61	ND (1.0)	13.8	668	---	---	---
	08/11/08		0.62	ND (1.0)	---	---	---	---	---
01-17	12/15/11		0.62	ND (1.0)	---	---	---	---	---
	01/11/12		0.58	ND (1.0)	---	---	---	---	---
	04/12/12		0.55	ND (1.0)	---	---	---	---	---
	07/13/12		0.56	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	08/01/12		0.57	---	8.04	497	10.2J	4.04	---
	10/02/12		0.63	ND (1.0)	---	---	---	---	---
	01/09/13		0.61	ND (1.0)	---	---	---	---	---
	04/03/13		0.64	ND (1.0)	---	---	---	---	---
	07/10/13		0.69	ND (1.0)	---	---	---	---	---
	01/14/14		0.61	ND (1.0)	---	---	---	---	---
	04/04/14		0.6	ND (1.0)	---	---	---	---	---
02-02A	08/15/02		1.5	2.2	---	---	---	---	---
	11/13/02		1.3	2.2	---	---	---	---	---
	10/28/03		1.9	2.7	---	---	---	---	---
	12/03/03		1.3	3.8	---	---	---	---	---
	02/17/04		1.8	4.2	---	---	---	---	---
	04/26/04		1.6	2.0	---	---	---	---	---
	10/12/04		1.5	1.9	---	---	---	---	---
	12/09/04		1.5	2.3	---	---	---	---	---
	02/09/05		1.4	7.4	---	---	---	---	---
	04/15/05		1.9	2.6	---	---	---	---	---
	06/09/05		1.6	1.9	---	---	---	---	---
	08/23/05		1.7	1.8	---	---	---	---	---
	10/14/05		4.0	5.5	---	---	---	---	---
	12/05/05		1.4	2.0	---	---	---	---	---
	02/21/06		1.4	2.0	---	---	---	---	---
	04/17/06		2.0	3.7	---	---	---	---	---
	06/13/06		1.7	3.4	---	---	---	---	---
	08/09/06		1.9	1.4	---	---	---	---	---
	10/18/06		0.5	ND (1.0)	---	---	---	---	---
	12/05/06		1.2	1.2	---	---	---	---	---
	02/20/07		1.0	1.8	---	---	---	---	---
	04/11/07		0.53	1.1	---	---	---	---	---
	06/19/07		ND (0.2)	ND (1.0)	---	---	---	---	---
	08/16/07		ND (0.2)	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/17/07		ND (0.2)	ND (1.0)	---	---	---	---	---
	12/04/07		ND (0.2)	ND (1.0)	---	---	---	---	---
	02/12/08		0.39	1.0	---	---	---	---	---
	04/08/08		ND (0.2)	ND (1.0)	---	---	---	---	---
	06/10/08		ND (0.2)	ND (1.0)	ND (1.00)	309	---	---	---
	08/11/08		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/06/08		0.54	ND (1.0)	---	---	---	---	---
	11/06/08	FD	0.54	ND (1.0)	---	---	---	---	---
	02/09/09		0.51	ND (1.0)	---	---	---	---	---
	05/13/09		0.51	ND (1.0)	---	---	---	---	---
	08/06/09		0.53	ND (1.0)	---	---	---	---	---
	11/12/09		0.47	ND (1.0)	---	---	---	---	---
	02/19/10		0.27	ND (1.0)	---	---	---	---	---
	05/13/10		ND (0.2)	ND (1.0)	---	---	---	---	---
	08/04/10		0.44	ND (1.0)	---	---	---	---	---
	10/26/10		0.33	ND (1.0)	---	---	---	---	---
	10/26/10	FD	0.25	ND (1.0)	---	---	---	---	---
	01/24/11		0.26	ND (1.0)	---	---	---	---	---
	04/04/11		0.29	ND (1.0)	---	---	---	---	---
	07/05/11		0.4	ND (1.0)	---	---	---	---	---
	11/28/11		0.74	ND (1.0)	---	---	---	---	---
	01/04/12		0.44	ND (1.0)	---	---	---	---	---
	05/09/12		0.59	ND (1.0)	---	---	---	---	---
	07/11/12		0.61	ND (1.0)	---	---	---	---	---
	10/02/12		0.47	ND (1.0)	---	---	---	---	---
	12/26/12		0.35	ND (1.0)	0.083	320	ND (3.00)	ND (4.00)	ND (1.00)
	01/08/13		0.34	ND (1.0)	---	---	---	---	---
	04/04/13		0.76	ND (1.0)	---	---	---	---	---
	07/02/13		0.51	ND (1.0)	---	---	---	---	---
	10/01/13		0.22	ND (1.0)	---	---	---	---	---
	01/07/14		0.86	1.2	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/01/14		0.53	ND (1.0)	---	---	---	---	---
	07/14/14		0.45	ND (1.0)	---	---	---	---	---
02-02B	06/18/13		2.1	1.8	---	---	---	---	---
	07/02/13		2.0	1.8	0.11	240	3.59	ND (4.00)	1.62
	07/02/13		2.1	2.0	---	---	---	---	---
	01/07/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/01/14		2.3	2.0	---	---	---	---	---
	07/14/14		2.1	2.3	---	---	---	---	---
	07/14/14	FD	2.2	2.3	---	---	---	---	---
02-23	12/04/07		0.35	ND (1.0)	---	---	---	---	---
	03/04/11		0.76	ND (1.0)	---	---	---	---	---
	07/05/11		0.84	ND (1.0)	---	---	---	---	---
	11/28/11		0.16	ND (1.0)	---	---	---	---	---
	11/28/11	FD	0.21	ND (1.0)	---	---	---	---	---
	01/12/12		0.67	ND (1.0)	---	---	---	---	---
	04/06/12		0.71	ND (1.0)	---	---	---	---	---
	07/19/12		0.39	ND (1.0)	---	---	---	---	---
	10/08/12		0.31	ND (1.0)	---	---	---	---	---
	11/19/12		0.69	ND (1.0)	0.30	290	4.40	ND (4.00)	4.00
	01/08/13		0.42	ND (1.0)	---	---	---	---	---
	04/02/13		0.72	ND (1.0)	---	---	---	---	---
	07/01/13		0.68	ND (1.0)	---	---	---	---	---
	10/01/13		0.69	ND (1.0)	---	---	---	---	---
	01/14/14		0.54	ND (1.0)	---	---	---	---	---
	04/01/14		0.7	ND (1.0)	---	---	---	---	---
	04/01/14	FD	0.69	ND (1.0)	---	---	---	---	---
	07/14/14		0.41	ND (1.0)	---	---	---	---	---
14-07	01/27/11		2.6	2.5	---	---	---	---	---
	07/05/11		2.9	2.6	---	---	---	---	---
	10/05/11		3.0	3.0	---	---	---	---	---
	09/26/12		2.9	2.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/08/12		2.8	2.7	---	---	---	---	---
	10/08/12	FD	2.8	2.6	---	---	---	---	---
14-15	10/08/12		2.8	2.6	---	---	---	---	---
15-04	06/21/11		2.0	2.0	---	---	---	---	---
	08/16/11		2.0	2.1	---	---	---	---	---
	10/07/11		2.0	2.2	---	---	---	---	---
15-05	08/11/11		1.7J	1.0J	---	---	---	---	---
	10/05/11		1.9	1.9	---	---	---	---	---
	01/04/12		1.8	1.9	---	---	---	---	---
	04/05/12		1.5	1.4	---	---	---	---	---
	07/11/12		1.7	1.4	---	---	---	---	---
	07/26/12		1.7	1.5	1.90	500	13.4	ND (4.00)	8.84
	10/02/12		1.6	1.6	---	---	---	---	---
	01/07/13		1.6	1.5	---	---	---	---	---
	04/02/13		1.5	1.4	---	---	---	---	---
	07/01/13		1.4	1.4	---	---	---	---	---
	10/01/13		1.8	1.8	---	---	---	---	---
	01/07/14		1.2	1.5	---	---	---	---	---
	04/03/14		1.4	1.4	---	---	---	---	---
	07/08/14		1.4	1.5	---	---	---	---	---
15-06	08/11/11		1.3	1.1	---	---	---	---	---
	10/05/11		1.7	1.9	---	---	---	---	---
	01/04/12		0.31	ND (1.0)	---	---	---	---	---
	04/05/12		0.42	ND (1.0)	---	---	---	---	---
	07/11/12		0.83	ND (1.0)	---	---	---	---	---
	08/23/12		0.2	ND (1.0)	1.20	430	12.0	ND (4.00)	9.21
	10/02/12		1.0	1.1	---	---	---	---	---
	01/07/13		0.15	ND (1.0)	---	---	---	---	---
	04/02/13		0.076	ND (1.0)	---	---	---	---	---
	07/01/13		0.85	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/01/13		1.1	1.3	---	---	---	---	---
	01/07/14		1.2	1.2	---	---	---	---	---
	01/07/14	FD	1.2	1.2	---	---	---	---	---
	04/03/14		1.1	1.2	---	---	---	---	---
	07/08/14		0.87	ND (1.0)	---	---	---	---	---
15-08	08/11/11		1.6	1.4	---	---	---	---	---
	10/05/11		1.8	1.7	---	---	---	---	---
	01/04/12		1.4	1.4	---	---	---	---	---
	04/05/12		1.5	1.4	---	---	---	---	---
	07/11/12		1.5	1.3	---	---	---	---	---
	07/11/12	FD	1.5	1.3	---	---	---	---	---
	07/26/12		1.5	1.3	1.60	520	6.48	ND (4.00)	6.25
	07/26/12	FD	1.5	1.3	1.50	460	8.69	ND (4.00)	6.04
	10/02/12		1.4	1.4	---	---	---	---	---
	01/07/13		1.3	1.1	---	---	---	---	---
	04/02/13		1.5	1.3	---	---	---	---	---
	07/01/13		1.0	1.2	---	---	---	---	---
	10/01/13		1.6	1.6	---	---	---	---	---
	01/07/14		1.4	1.3	---	---	---	---	---
	04/03/14		1.4	1.4	---	---	---	---	---
	07/08/14		1.4	1.3	---	---	---	---	---
	07/08/14	FD	1.4	1.3	---	---	---	---	---
15-12	08/18/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	10/05/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/07/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/05/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/05/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	04/05/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/11/12		0.081	ND (1.0)	---	---	---	---	---
	07/26/12		ND (0.06)	ND (1.0)	2.20	1,600	23.9	5.40	14.4
	10/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/02/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	01/07/13		ND (0.3)	ND (1.0)	---	---	---	---	---
	04/02/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/02/13	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
15-14	12/16/11		1.9	2.4	---	---	---	---	---
	01/25/12		0.58	ND (1.0)	---	---	---	---	---
	04/03/12		1.9	1.8	---	---	---	---	---
	07/20/12		1.8	1.7	---	---	---	---	---
	10/04/12		2.0	2.0	---	---	---	---	---
22-09	08/18/11		0.81	1.2	---	---	---	---	---
	10/04/11		0.63	1.7	---	---	---	---	---
	01/16/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/02/12		0.56	ND (1.0)	---	---	---	---	---
	05/22/12		1.4	1.3	2.20	478	5.49	ND (4.00)	7.36
	07/09/12		1.3	1.5	---	---	---	---	---
	10/03/12		1.2	1.8	---	---	---	---	---
	01/08/13		1.5	1.3	---	---	---	---	---
	01/08/13	FD	1.5	1.3	---	---	---	---	---
	04/09/13		1.4	1.4	---	---	---	---	---
	07/12/13		1.5	1.2	---	---	---	---	---
	10/10/13		0.72	ND (1.0)	---	---	---	---	---
22-103	07/09/12		2.2	2.0	---	---	---	---	---
	10/04/12		2.1	2.2	---	---	---	---	---
	01/25/13		2.1	2.2	---	---	---	---	---
	04/04/13		2.2	2.4	---	---	---	---	---
	07/02/13		2.2	2.0	---	---	---	---	---
	10/01/13		2.2	2.3	---	---	---	---	---
	01/07/14		2.2	2.0	---	---	---	---	---
	04/02/14		2.1	2.0	1.70	520	14.9	4.18J	9.60
	07/07/14		2.0	1.9	1.90	550	15.5J	ND (4.00)	9.40

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
22-105	07/17/12		1.4	1.2	---	---	---	---	---
	10/03/12		1.1	1.3	---	---	---	---	---
22-106	10/04/12		ND (0.06)	ND (1.0)	---	---	---	---	---
22-108	01/16/13		0.092	ND (1.0)	---	---	---	---	---
	07/02/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/01/13		0.28	ND (1.0)	---	---	---	---	---
	01/08/14		0.23	ND (1.0)	---	---	---	---	---
	04/02/14		ND (0.06)	ND (1.0)	8.40	2,000	38.0	5.59J	26.0
	04/02/14		---	---	---	---	21.1JS	---	---
	07/07/14		0.15	ND (1.0)	9.70	2,300	26.3J	4.18	29.0
22-15	12/20/10		1.1	1.2	---	---	---	---	---
	08/16/11		1.6	1.5	---	---	---	---	---
	10/07/11		1.1	1.2	---	---	---	---	---
	01/05/12		0.69	ND (1.0)	---	---	---	---	---
	04/03/12		1.2	ND (1.0)	---	---	---	---	---
	06/28/12		1.3	ND (1.0)	---	---	---	---	---
	07/09/12		1.4	ND (1.0)	---	---	---	---	---
22-23	07/17/12		1.3	1.2	---	---	---	---	---
	10/03/12		1.3	1.4	---	---	---	---	---
	01/16/13		1.4	1.4	---	---	---	---	---
	04/01/13		1.4	1.2	---	---	---	---	---
	07/02/13		1.4	1.4	---	---	---	---	---
	07/02/13	FD	1.5	1.3	---	---	---	---	---
	10/10/13		0.84	ND (1.0)	---	---	---	---	---
	07/09/14		1.4	1.5	---	---	---	---	---
22-30	06/26/03		1.9	2.1	---	---	---	---	---
	01/12/11		2.4	2.2	---	---	---	---	---
	04/04/11		2.4	2.5	---	---	---	---	---
	07/06/11		2.6	2.5	---	---	---	---	---
	10/04/11		2.4	2.9	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	01/17/12		2.3	2.1	---	---	---	---	---
	04/04/12		2.3	2.2	---	---	---	---	---
	10/03/12		2.3	2.2	---	---	---	---	---
	11/07/12		2.4	2.3	3.00	420	9.13	ND (4.00)	7.83
	01/10/13		2.3	2.5	---	---	---	---	---
	04/04/13		2.4	2.5	---	---	---	---	---
	04/04/13	FD	2.3	2.5	---	---	---	---	---
	07/08/13		2.4	2.1	---	---	---	---	---
	10/02/13		2.3	2.5	---	---	---	---	---
	01/13/14		2.7	2.5	---	---	---	---	---
	04/04/14		2.3	2.3	---	---	---	---	---
	07/16/14		2.2	2.1	3.40	470	7.31	4.01	7.50
22-39	10/07/08		---	---	4.75	1,700	---	---	---
	01/03/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	07/06/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	07/06/11	FD	ND (0.2)	ND (1.0)	---	---	---	---	---
	09/13/11		ND (0.2)	1.6	---	---	---	---	---
	10/05/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/07/11		0.14	ND (1.0)	---	---	---	---	---
	01/05/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/11/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/11/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	07/09/12		0.064	ND (1.0)	---	---	---	---	---
	07/09/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	10/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/08/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/01/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/02/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/02/13	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	10/02/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/08/14		ND (0.06)	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/02/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/01/14		ND (0.06)	ND (1.0)	11.0	2,400	19.9	4.04	30.0
22-44	12/15/10		2.0	2.3	---	---	---	---	---
	11/10/11		2.0	2.0	---	---	---	---	---
	01/16/12		1.8	1.6	---	---	---	---	---
	04/02/12		1.8	1.7	---	---	---	---	---
	07/10/12		1.9	1.6	---	---	---	---	---
	10/04/12		1.8	1.8	---	---	---	---	---
	01/18/13		1.9	1.8	---	---	---	---	---
22-48	01/10/11		1.6	1.7	---	---	---	---	---
	01/10/11	FD	1.5	1.6	---	---	---	---	---
	10/04/11		1.6	2.1	---	---	---	---	---
	01/16/12		1.5	1.4	---	---	---	---	---
	04/09/12		1.6	1.4	---	---	---	---	---
	07/09/12		1.6	1.4	---	---	---	---	---
	07/09/12	FD	1.5	1.4	---	---	---	---	---
	10/03/12		1.5	1.5	---	---	---	---	---
	01/14/13		1.6	1.5	---	---	---	---	---
	04/02/13		1.6	1.4	---	---	---	---	---
	06/04/13		1.5	1.6	1.20	360	8.39	ND (4.00)	7.24
	07/03/13		1.6	1.4	---	---	---	---	---
	10/01/13		1.6	1.8	---	---	---	---	---
	01/08/14		1.5	1.6	---	---	---	---	---
	04/08/14		1.6	1.6	---	---	---	---	---
	07/14/14		1.5	1.5	---	---	---	---	---
	07/14/14	FD	1.4	1.5	---	---	---	---	---
22-59	12/21/10		1.1	1.3	---	---	---	---	---
	11/10/11		1.2	ND (1.0)	---	---	---	---	---
	01/12/12		0.98	ND (1.0)	---	---	---	---	---
	01/12/12	FD	0.83	ND (1.0)	---	---	---	---	---
	04/18/12		0.82	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/03/12		0.86	ND (1.0)	---	---	---	---	---
22-60	01/04/11		0.27	ND (1.0)	---	---	---	---	---
	08/16/11		0.34	ND (1.0)	---	---	---	---	---
	10/03/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/09/11		0.2	ND (1.0)	---	---	---	---	---
	01/11/12		0.14	ND (1.0)	---	---	---	---	---
	04/12/12		0.15	ND (1.0)	---	---	---	---	---
	07/11/12		0.092	ND (1.0)	---	---	---	---	---
	10/18/12		0.15	ND (1.0)	---	---	---	---	---
	01/11/13		0.15	ND (1.0)	---	---	---	---	---
	04/03/13		0.29	ND (1.0)	---	---	---	---	---
	07/11/13		0.28	ND (1.0)	---	---	---	---	---
	10/10/13		0.13	ND (1.0)	---	---	---	---	---
	01/16/14		0.16	ND (1.0)	---	---	---	---	---
22-62	01/05/11		1.4	2.1	---	---	---	---	---
	11/28/11		1.3	1.5	---	---	---	---	---
	01/12/12		1.2	1.0	---	---	---	---	---
	04/04/12		1.3	1.2	---	---	---	---	---
	06/14/12		1.3	1.1	1.50	720	ND (3.00)	ND (4.00)	5.03
	07/11/12		1.3	1.0	---	---	---	---	---
	07/11/12	FD	1.2	1.0	---	---	---	---	---
	10/08/12		1.3	1.1	---	---	---	---	---
	01/10/13		1.3	1.2	---	---	---	---	---
	04/04/13		1.3	1.3	---	---	---	---	---
	07/08/13		1.3	1.3	---	---	---	---	---
	10/04/13		1.2	1.2	---	---	---	---	---
	03/18/14		1.2	1.2	---	---	---	---	---
	04/07/14		1.3	1.2	1.40	740	9.04	4.30	5.40J
	07/15/14		1.2	1.3	2.40	730	7.48J	ND (4.00)	6.00
22-63	12/20/10		1.1	2.2	---	---	---	---	---
	12/01/11		0.54	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	01/10/12		0.35	ND (1.0)	---	---	---	---	---
	04/11/12		0.59	ND (1.0)	---	---	---	---	---
	04/11/12	FD	0.69	ND (1.0)	---	---	---	---	---
	07/09/12		1.2	1.2	---	---	---	---	---
	10/03/12		1.4	1.4	---	---	---	---	---
	01/16/13		0.58	ND (1.0)	---	---	---	---	---
	04/01/13		1.1	ND (1.0)	---	---	---	---	---
	07/08/13		1.6	1.5	---	---	---	---	---
	07/08/13	FD	1.6	1.5	---	---	---	---	---
	10/01/13		0.99	1.2	---	---	---	---	---
	01/06/14		0.16	ND (1.0)	---	---	---	---	---
22-67	04/04/13		ND (0.06)	ND (1.0)	---	---	---	---	---
22-69	04/27/11		0.47	ND (1.0)	---	---	---	---	---
	07/07/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	06/06/12		0.27	ND (1.0)	---	---	---	---	---
	07/12/12		0.51	ND (1.0)	---	---	---	---	---
	10/03/12		0.57	ND (1.0)	---	---	---	---	---
	04/01/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/08/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/02/14		0.16	ND (1.0)	3.00	700	8.26	ND (4.00)	8.10
22-70	11/23/11		0.94	1.1	---	---	---	---	---
	06/13/12		1.7	1.6	---	---	---	---	---
	07/10/12		0.99	ND (1.0)	---	---	---	---	---
	10/03/12		1.1	1.1	---	---	---	---	---
	01/07/13		0.95	ND (1.0)	---	---	---	---	---
	04/01/13		1.2	1.0	---	---	---	---	---
	07/02/13		1.9	1.8	---	---	---	---	---
	10/01/13		0.36	ND (1.0)	---	---	---	---	---
22-74	04/27/11		2.2	3.0	---	---	---	---	---
	07/07/11		2.1	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/03/11		2.2	2.7	---	---	---	---	---
	01/10/12		2.1	2.0	---	---	---	---	---
	01/10/12	FD	2.1	2.0	---	---	---	---	---
	04/04/12		2.1	2.0	---	---	---	---	---
	07/09/12		2.1	1.9	---	---	---	---	---
	10/03/12		2.1	2.2	---	---	---	---	---
	10/18/12		2.1	2.1	4.10	530	7.37	ND (4.00)	7.40
	01/08/13		2.1	2.1	---	---	---	---	---
	04/02/13		2.0	1.7	---	---	---	---	---
	07/03/13		2.0	1.7	---	---	---	---	---
	10/01/13		2.0	1.9	---	---	---	---	---
	01/06/14		1.8	1.8	---	---	---	---	---
22-75	04/27/11		1.8	1.9	---	---	---	---	---
	04/27/11	FD	1.8	1.9	---	---	---	---	---
	07/06/11		1.8	2.1	---	---	---	---	---
	10/04/11		1.8	2.2	---	---	---	---	---
	01/09/12		1.8	1.6	---	---	---	---	---
	04/04/12		1.8	1.7	---	---	---	---	---
	07/09/12		1.7	1.4	---	---	---	---	---
	09/26/12		1.8	1.6	3.80	660	7.28J	ND (4.00)	9.77
	09/26/12	FD	1.8	1.8	3.80	680	15.0J	4.10	9.22
	10/03/12		1.7	1.6	---	---	---	---	---
	01/09/13		1.8	1.7	---	---	---	---	---
	04/08/13		1.7	1.7	---	---	---	---	---
	07/03/13		1.7	1.5	---	---	---	---	---
	10/01/13		1.8	1.8	---	---	---	---	---
	01/13/14		1.6	1.6	---	---	---	---	---
	04/04/14		1.7	1.7	3.30	700	13.3	ND (4.00)	9.60
	07/16/14		1.7	1.6	3.70	700	5.59J	ND (4.00)	7.30
	07/16/14	FD	1.8	1.8	3.60	700	8.75	ND (4.00)	7.50
22-78	11/03/11		0.12	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	01/20/12		0.21	ND (1.0)	---	---	---	---	---
	04/11/12		0.45	ND (1.0)	---	---	---	---	---
	04/03/13		0.14	ND (1.0)	---	---	---	---	---
	04/02/14		0.54	ND (1.0)	---	---	---	---	---
	04/02/14	FD	0.47	1.1	---	---	---	---	---
22-79	11/09/11		0.9	1.4	---	---	---	---	---
	01/14/13		1.3	1.3	---	---	---	---	---
	04/01/13		0.55	ND (1.0)	---	---	---	---	---
	01/10/14		1.2	1.3	---	---	---	---	---
22-81	10/06/11		1.6	1.6	---	---	---	---	---
	01/05/12		0.97	1.1	---	---	---	---	---
	04/11/12		1.4	1.4	---	---	---	---	---
	07/11/12		1.7	1.5	---	---	---	---	---
	10/03/12		1.6	1.7	---	---	---	---	---
	10/18/12		1.3	1.4	4.20	440	10.1	ND (4.00)	7.44
	01/15/13		1.1	1.1	---	---	---	---	---
	04/01/13		1.5	1.4	---	---	---	---	---
	07/08/13		1.8	1.6	---	---	---	---	---
	10/01/13		1.4	1.4	---	---	---	---	---
	01/07/14		0.77	ND (1.0)	---	---	---	---	---
	04/02/14		1.4	1.3	3.30	460	13.2	ND (4.00)	7.90
	07/14/14		1.3	1.4	3.90	430	7.30J	ND (4.00)	7.60
22-82	11/10/11		0.24	ND (1.0)	---	---	---	---	---
	01/23/12		0.1	ND (1.0)	---	---	---	---	---
	04/11/12		0.18	ND (1.0)	---	---	---	---	---
	07/19/12		0.52	ND (1.0)	---	---	---	---	---
	10/18/12		0.1	ND (1.0)	---	---	---	---	---
	12/04/12		0.36	ND (1.0)	13.0	720	7.94	6.12	8.07
	01/15/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/01/13		0.35	ND (1.0)	---	---	---	---	---
	04/01/13	FD	0.33	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/03/13		0.56	ND (1.0)	---	---	---	---	---
	10/01/13		0.64	ND (1.0)	---	---	---	---	---
	01/07/14		0.091	ND (1.0)	---	---	---	---	---
	04/02/14		0.12	ND (1.0)	12.0	690	15.2	6.20J	9.50
	07/14/14		0.51	ND (1.0)	11.0	650	16.3J	ND (4.00)	8.60
22-88	04/03/14		0.99	1.3	---	---	---	---	---
22-90	11/30/11		1.2	1.5	---	---	---	---	---
	01/12/12		1.2	ND (1.0)	---	---	---	---	---
	05/16/12		1.3	1.0	---	---	---	---	---
23-07	03/28/03		1.0	2.4	---	---	---	---	---
	07/08/04		1.4	---	9.50	2,800	---	---	---
	11/14/06		1.1J	1.7	---	---	---	---	---
	01/07/11		2.5	2.2	---	---	---	---	---
	01/07/11	FD	2.6	2.6	---	---	---	---	---
	03/07/11		1.3	1.5	---	---	---	---	---
	04/26/11		1.9	2.1	---	---	---	---	---
	07/13/11		1.8	1.9	---	---	---	---	---
	10/05/11		2.4	2.6	---	---	---	---	---
	10/27/11		2.4	2.6	---	---	---	---	---
	01/12/12		1.5	1.2	---	---	---	---	---
	04/13/12		2.0	1.7	---	---	---	---	---
	07/13/12		1.9	1.6	---	---	---	---	---
	10/16/12		1.0	1.9	---	---	---	---	---
	03/12/13		1.9	2.3	---	---	---	---	---
	01/24/14		1.6	1.8	---	---	---	---	---
	04/04/14		2.1	3.0	---	---	---	---	---
	07/11/14		2.0	2.4	---	---	---	---	---
23-24	06/26/08		---	---	54.3	---	---	---	---
	10/08/08		---	---	54.3	4,800	---	---	---
	01/19/10		1.5	1.6	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	08/02/10		2.3	1.8	---	---	---	---	---
	10/27/10		2.7	2.1	---	---	---	---	---
	02/09/11		1.9	1.8	---	---	---	---	---
	04/05/11		2.4	2.2	---	---	---	---	---
	07/13/11		2.3	1.9	---	---	---	---	---
	10/05/11		ND (1.0)	ND (1.0)	---	---	---	---	---
	11/07/11		2.6	2.2	---	---	---	---	---
	01/09/12		2.0	1.6	---	---	---	---	---
	04/20/12		1.5	1.2	---	---	---	---	---
	07/10/12		ND (0.3)	ND (1.0)	---	---	---	---	---
	10/01/12		1.0	1.4	---	---	---	---	---
	01/08/13		ND (0.06)	1.5	---	---	---	---	---
	07/01/13		0.38	ND (1.0)	---	---	---	---	---
	10/08/13		0.39	1.0	---	---	---	---	---
	10/08/13	FD	0.43	1.0	---	---	---	---	---
	04/07/14		0.35	ND (1.0)	---	---	---	---	---
	07/07/14		0.34	ND (1.0)	1.80	370	4.40J	ND (4.00)	2.90
23-25	08/05/09		0.3	1.0	---	---	---	---	---
	02/19/10		1.4	1.9	0.60	384	---	---	---
	08/02/10		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/02/10		0.77	1.4	---	---	---	---	---
	12/07/10		0.41	ND (1.0)	---	---	---	---	---
	02/09/11		1.3	1.7	---	---	---	---	---
	04/06/11		0.84	1.0	---	---	---	---	---
	08/16/11		0.7	1.0	---	---	---	---	---
	10/06/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	10/06/11	FD	ND (0.2)	ND (1.0)	---	---	---	---	---
	11/07/11		1.2	1.6	---	---	---	---	---
	01/04/12		1.4	1.6	---	---	---	---	---
	05/16/12		2.1	2.3	---	---	---	---	---
	07/10/12		2.2	2.5	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/01/12		2.1	2.8	---	---	---	---	---
	01/09/13		1.3	2.1	---	---	---	---	---
	04/03/14		1.5	2.4	---	---	---	---	---
	07/21/14		2.7	2.9	14.0	1,400	62.5	ND (4.00)	48.0
23-27	08/20/10		ND (0.2)	ND (1.0)	---	---	---	---	---
	01/24/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	04/07/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	07/13/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	10/07/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/15/11		0.087	ND (1.0)	---	---	---	---	---
	01/05/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/30/12		0.2	ND (1.0)	---	---	---	---	---
	07/10/12		0.069	ND (1.0)	---	---	---	---	---
23-28	01/10/11		1.8	2.4	---	---	---	---	---
	01/10/11	FD	1.8	1.9	---	---	---	---	---
	04/06/11		2.1	2.2	---	---	---	---	---
	08/16/11		2.0	3.2J	---	---	---	---	---
	10/31/11		1.9	2.0	---	---	---	---	---
	01/16/12		0.53	ND (1.0)	---	---	---	---	---
	04/30/12		2.1	1.8	---	---	---	---	---
	08/09/12		2.1	1.6	---	---	---	---	---
	08/09/12	FD	2.1	1.6	---	---	---	---	---
	01/11/13		1.3	1.0	---	---	---	---	---
	10/03/13		2.0	1.8	---	---	---	---	---
	01/16/14		1.4	1.4	---	---	---	---	---
	04/04/14		2.1	2.0	---	---	---	---	---
	07/10/14		1.8	1.7	3.80	340J	12.5J	ND (4.00)	8.50
	07/10/14	FD	1.9	1.8	3.90	460J	11.4J	ND (4.00)	8.70
24-03	08/10/10		2.7	2.6	---	---	---	---	---
	12/07/10		2.5	2.7	---	---	---	---	---
	02/09/11		2.6	2.6	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/06/11		2.8	2.9	---	---	---	---	---
	07/12/11		2.7	2.4	---	---	---	---	---
	10/05/11		2.7	2.9	---	---	---	---	---
	01/04/12		2.6	2.7	---	---	---	---	---
	04/11/12		2.5	2.3	---	---	---	---	---
	07/19/12		2.7	2.6	---	---	---	---	---
	10/01/12		2.5	2.8	---	---	---	---	---
	01/09/13		2.2	2.3	---	---	---	---	---
	04/04/13		0.41	ND (1.0)	---	---	---	---	---
	01/09/14		1.4	1.8	---	---	---	---	---
	01/09/14	FD	1.3	1.8	---	---	---	---	---
	04/04/14		1.4	1.7	---	---	---	---	---
24-06	07/08/04		ND (1.0)	---	ND (0.50)	290	---	---	---
	10/19/06		ND (0.2)	ND (1.0)	---	---	---	---	---
	12/20/10		0.21	ND (1.0)	---	---	---	---	---
25-14	04/01/10		1.2	ND (1.0)	2.06	538	---	---	---
	08/02/10		0.22	ND (1.0)	---	---	---	---	---
	10/27/10		1.7	1.5	---	---	---	---	---
	02/10/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	02/10/11	FD	ND (0.2)	ND (1.0)	---	---	---	---	---
	04/05/11		0.25	ND (1.0)	---	---	---	---	---
	07/07/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	10/06/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/08/11		1.1	ND (1.0)	---	---	---	---	---
	01/03/12		1.3	1.3	---	---	---	---	---
	05/09/12		0.37	ND (1.0)	---	---	---	---	---
	09/05/12		1.6	1.5	---	---	---	---	---
	10/01/12		1.0	ND (1.0)	---	---	---	---	---
	01/08/13		0.092	ND (1.0)	---	---	---	---	---
	04/04/13		0.83	ND (1.0)	---	---	---	---	---
	07/09/13		0.25	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/02/13		1.4	1.4	---	---	---	---	---
	01/07/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/04/14		0.13	ND (1.0)	---	---	---	---	---
	07/01/14		0.39	1.0	3.40	570	11.0	ND (4.00)	8.50
25-16	12/09/10		2.3	2.7	---	---	---	---	---
	03/04/11		2.6	2.4	---	---	---	---	---
	05/05/11		2.3	2.2	---	---	---	---	---
	10/24/11		2.4	2.4	---	---	---	---	---
	01/27/12		2.2	2.1	---	---	---	---	---
	05/09/12		2.3	2.3	---	---	---	---	---
	07/17/12		2.3	2.3	---	---	---	---	---
	10/05/12		2.2	2.1	---	---	---	---	---
	07/16/13		2.3	2.2	---	---	---	---	---
	06/02/14		2.3	2.2	---	---	---	---	---
	07/07/14		2.2	2.5	---	---	---	---	---
25-18	05/16/12		2.0	1.9	---	---	---	---	---
	10/19/12		2.2	3.1	---	---	---	---	---
	04/10/13		1.9	1.9	---	---	---	---	---
27-08	09/14/06		2.0	1.9	---	---	---	---	---
	09/14/06	FD	1.9	1.6	---	---	---	---	---
	12/07/06		1.8	1.8	---	---	---	---	---
	02/15/07		1.8	2.1	---	---	---	---	---
	04/13/07		1.4	1.4	---	---	---	---	---
	06/20/07		1.9	1.9	---	---	---	---	---
	08/16/07		1.6	1.7	---	---	---	---	---
	10/15/07		0.86	1.3	---	---	---	---	---
	12/07/07		0.79	ND (1.0)	---	2,500	---	---	---
	02/13/08		0.38	ND (1.0)	---	---	---	---	---
	04/10/08		0.57	ND (1.0)	---	---	---	---	---
	06/12/08		0.93	1.2	6.30	2,720	---	---	---
	08/06/08		1.5	1.3J	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	08/06/08	FD	1.5	1.2	---	---	---	---	---
	08/26/08		---	---	---	2,340	---	---	---
	11/06/08		1.1	ND (1.0)	---	---	---	---	---
	02/05/09		0.98	1.2	---	2,290	---	---	---
	05/14/09		1.1	1.1	---	---	---	---	---
	05/14/09	FD	1.1	1.2	---	---	---	---	---
	08/06/09		1.1	1.4	---	2,210	---	---	---
	11/12/09		0.89	1.2	---	---	---	---	---
	02/11/10		0.8	ND (1.0)	---	2,280	---	---	---
	05/13/10		1.3	1.4	---	---	---	---	---
	08/05/10		1.5	1.3	---	---	---	---	---
	08/20/10		---	---	---	1,850	---	---	---
	10/28/10		2.7J	1.7J	---	---	---	---	---
	01/21/11		0.76	1.3	---	---	---	---	---
	02/07/11		1.1	1.2	---	1,220	---	---	---
	03/08/11		1.5	1.4	---	---	---	---	---
	04/07/11		1.9	1.9	---	---	---	---	---
	05/11/11		1.2	1.4	---	---	---	---	---
	06/07/11		1.6	1.4	---	---	---	---	---
	07/07/11		1.5	1.2	---	---	---	---	---
	08/17/11		1.5	1.4	---	---	---	---	---
	09/13/11		1.5	1.6	---	---	---	---	---
	09/13/11	FD	1.5	2.0	---	---	---	---	---
	09/28/11		---	---	---	1,430	---	---	---
	10/04/11		0.81	1.5	---	---	---	---	---
	11/14/11		1.3	1.3	---	---	---	---	---
	01/03/12		0.65	ND (1.0)	---	---	---	---	---
	02/24/12		1.4	1.1	---	1,500	---	---	---
	03/28/12		1.4	1.3	---	---	---	---	---
	04/16/12		1.3	1.1	---	---	---	---	---
	05/16/12		1.4	1.3	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	06/14/12		1.5	1.3	---	---	---	---	---
	07/12/12		1.4	1.2	---	1,500	---	---	---
	08/09/12		1.7	1.1	---	---	---	---	---
	09/06/12		1.6	1.4	---	---	---	---	---
	10/02/12		1.4	1.4	---	---	---	---	---
	11/08/12		1.2	1.2	---	---	---	---	---
	12/04/12		1.1	1.2	---	---	---	---	---
	01/08/13		0.8	ND (1.0)	---	1,300	---	---	---
	02/20/13		1.0	ND (1.0)	---	---	---	---	---
	03/12/13		1.3	1.7	---	---	---	---	---
	04/02/13		1.5	1.2	---	---	---	---	---
	04/02/13	FD	1.5	1.3	---	---	---	---	---
27-16	09/14/06		1.2	1.2	---	---	---	---	---
	03/03/11		1.4	1.2	---	---	---	---	---
	04/05/11		1.5	1.8	---	---	---	---	---
	07/07/11		1.5	1.4	---	---	---	---	---
	10/07/11		1.2	1.5	---	---	---	---	---
	01/10/12		1.4	1.2	---	---	---	---	---
	04/12/12		1.4	1.2	---	---	---	---	---
	07/10/12		1.3	1.2	---	---	---	---	---
	10/08/12		1.3	1.2	---	---	---	---	---
	01/10/13		1.4	1.3	---	---	---	---	---
	04/02/13		1.4	1.2	---	---	---	---	---
	07/03/13		1.2	1.1	---	---	---	---	---
	10/03/13		1.2	1.0	---	---	---	---	---
	10/03/13	FD	1.2	1.1	---	---	---	---	---
	01/09/14		1.3	1.3	---	---	---	---	---
	04/02/14		1.4	1.2	---	---	---	---	---
	07/09/14		1.2	1.2	---	---	---	---	---
27-26	01/16/06		2.1	2.4	1.66	370	---	---	---
	11/03/09		1.8	1.8	---	463	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	03/04/11		2.0	1.5	---	---	---	---	---
	04/05/11		1.9	2.3	---	---	---	---	---
	07/07/11		1.9	1.7	---	---	---	---	---
	10/06/11		1.9	2.1	---	---	---	---	---
	01/09/12		1.7	1.4	---	---	---	---	---
	05/09/12		1.7	1.7	---	---	---	---	---
	05/09/12	FD	1.8	1.7	---	---	---	---	---
	07/11/12		1.6	1.5	---	---	---	---	---
	10/04/12		1.7	1.7	---	---	---	---	---
	01/09/13		1.7	1.5	---	---	---	---	---
	04/04/13		1.8	1.8	---	---	---	---	---
	07/09/13		1.7	1.5	---	---	---	---	---
	10/08/13		1.7	1.8	---	---	---	---	---
	01/09/14		1.7	1.6	---	---	---	---	---
	04/02/14		1.7	1.6	---	---	---	---	---
	07/02/14		1.6	1.6	6.60	480	26.7	4.11	5.90
	07/02/14	FD	1.6	1.5	6.70	500	26.8	4.51	5.90
27-38	09/14/06		1.4	1.2	---	---	---	---	---
	12/07/06		1.5	1.6	---	---	---	---	---
	02/15/07		0.62	ND (1.0)	---	---	---	---	---
	04/13/07		0.96	1.1	---	---	---	---	---
	04/13/07	FD	0.96	ND (1.0)	---	---	---	---	---
	06/20/07		1.6	1.8	---	---	---	---	---
	06/20/07	FD	1.6	1.6	---	---	---	---	---
	08/16/07		1.5	1.3	---	---	---	---	---
	10/15/07		1.8	1.7	---	---	---	---	---
	12/07/07		0.97	1.1	---	630	---	---	---
	02/13/08		1.8	1.8	---	---	---	---	---
	04/10/08		0.75	1.3	---	---	---	---	---
	06/12/08		0.6	1.3	1.84	622	---	---	---
	08/06/08		1.6	1.3	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	08/26/08		---	---	---	633	---	---	---
	11/06/08		1.0	ND (1.0)	---	---	---	---	---
	02/05/09		ND (0.2)	ND (1.0)	---	593	---	---	---
	05/14/09		0.9	1.0	---	---	---	---	---
	08/06/09		1.4	1.7	---	596	---	---	---
	11/12/09		0.7	ND (1.0)	---	---	---	---	---
	02/11/10		0.57	ND (1.0)	---	657	---	---	---
	05/13/10		0.93	1.5	---	---	---	---	---
	08/05/10		1.3	1.4	---	---	---	---	---
	08/20/10		---	---	---	634	---	---	---
	10/28/10		2.9J	1.6J	---	---	---	---	---
	01/21/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	02/07/11		0.37	ND (1.0)	---	535	---	---	---
	03/08/11		1.2	1.4	---	---	---	---	---
	04/07/11		0.96	1.5	---	---	---	---	---
	04/07/11	FD	1.0	1.8	---	---	---	---	---
	05/11/11		1.7	1.7	---	---	---	---	---
	06/07/11		1.7	1.4	---	---	---	---	---
	07/07/11		1.6	1.6	---	---	---	---	---
	08/17/11		1.6	1.5	---	---	---	---	---
	09/13/11		1.6	3.0	---	---	---	---	---
	09/28/11		1.6	1.8	---	581	---	---	---
	09/28/11	FD	1.7	1.9	---	591	---	---	---
	10/04/11		1.2	1.6	---	---	---	---	---
	11/14/11		1.1	1.3	---	---	---	---	---
	01/03/12		0.62	ND (1.0)	---	---	---	---	---
	02/24/12		0.42	ND (1.0)	---	660	---	---	---
	03/28/12		1.2	1.4	---	---	---	---	---
	04/16/12		0.72	ND (1.0)	---	---	---	---	---
	04/16/12	FD	0.73	ND (1.0)	---	---	---	---	---
	05/16/12		0.91	1.2	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	06/14/12		1.5	1.4	---	---	---	---	---
	07/12/12		1.4	1.4	---	590	---	---	---
	08/09/12		1.7	1.3	---	---	---	---	---
	09/06/12		1.7	1.4	---	---	---	---	---
	10/02/12		1.5	1.5	---	---	---	---	---
	11/08/12		1.3	1.4	---	---	---	---	---
	12/04/12		0.72	ND (1.0)	---	---	---	---	---
	01/08/13		0.49	1.1	---	560	---	---	---
	02/20/13		0.61	ND (1.0)	---	---	---	---	---
	03/12/13		0.31	ND (1.0)	---	---	---	---	---
	04/02/13		1.4	1.3	---	---	---	---	---
	05/07/13		1.3	1.4	---	---	---	---	---
	06/04/13		1.4	1.4	---	---	---	---	---
	07/02/13		1.5	1.4	---	570	---	---	---
	08/01/13		1.6	1.8	---	---	---	---	---
	09/13/13		1.4	1.5	---	---	---	---	---
	10/01/13		1.7	1.6	---	---	---	---	---
	11/07/13		0.78	ND (1.0)	---	---	---	---	---
	12/10/13		0.11	ND (1.0)	---	---	---	---	---
	12/10/13	FD	0.088	ND (1.0)	---	---	---	---	---
	01/07/14		0.27	ND (1.0)	---	---	---	---	---
	02/05/14		1.2	1.4	---	---	---	---	---
	03/19/14		1.4	2.0	---	---	---	---	---
	04/03/14		1.2	1.4	---	---	---	---	---
	04/03/14	FD	1.2	1.3	---	---	---	---	---
27-39	09/14/06		1.4	1.2	---	---	---	---	---
	12/07/06		0.34	ND (1.0)	---	---	---	---	---
	02/15/07		1.7	2.0	---	---	---	---	---
	04/13/07		0.75	2.1	---	---	---	---	---
	06/20/07		1.5	1.5	---	---	---	---	---
	08/16/07		1.5	1.3	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/15/07		1.3	1.5	---	---	---	---	---
	12/07/07		1.1	1.1	---	738	---	---	---
	02/13/08		0.51	1.7	---	---	---	---	---
	04/10/08		0.9	1.2	---	---	---	---	---
	06/12/08		1.1	1.5	8.64	836	---	---	---
	08/06/08		1.5	1.3J	---	---	---	---	---
	08/26/08		---	---	---	1,260	---	---	---
	11/06/08		1.5	ND (1.0)	---	---	---	---	---
	02/05/09		0.54	ND (1.0)	---	906	---	---	---
	05/14/09		1.3	1.5	---	---	---	---	---
	08/06/09		1.2	1.4	---	1,030	---	---	---
	11/12/09		0.73	1.1	---	---	---	---	---
	02/11/10		0.7	1.0	---	894	---	---	---
	05/13/10		0.77	1.1	---	---	---	---	---
	08/05/10		1.7	1.5	---	---	---	---	---
	08/20/10		---	---	---	644	---	---	---
	10/28/10		0.88	1.3	---	---	---	---	---
	01/21/11		1.2	1.6	---	---	---	---	---
	02/07/11		1.6	1.8	---	1,040	---	---	---
	03/08/11		0.2	ND (1.0)	---	---	---	---	---
	04/07/11		1.2	1.8	---	---	---	---	---
	05/11/11		1.7	2.0	---	---	---	---	---
	06/07/11		1.6	1.6	---	---	---	---	---
	07/07/11		1.4	1.6	---	---	---	---	---
	08/17/11		1.6	1.7	---	---	---	---	---
	09/13/11		1.6	2.0	---	---	---	---	---
	09/28/11		---	---	---	604	---	---	---
	10/04/11		0.65	1.1	---	---	---	---	---
	11/14/11		1.9	2.0	---	---	---	---	---
	11/14/11	FD	1.9	1.9	---	---	---	---	---
	01/03/12		0.17	1.0	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	02/24/12		1.2	1.5	---	1,000	---	---	---
	03/28/12		0.71	1.1	---	---	---	---	---
	04/16/12		0.62	ND (1.0)	---	---	---	---	---
	05/16/12		1.1	1.2	---	---	---	---	---
	06/14/12		1.3	1.3	---	---	---	---	---
	07/12/12		1.5	1.5	---	680	---	---	---
	08/09/12		1.7	1.2	---	---	---	---	---
	09/06/12		1.3	1.3	---	---	---	---	---
	10/02/12		1.2	1.4	---	---	---	---	---
	11/08/12		0.12	ND (1.0)	---	---	---	---	---
	12/04/12		0.24	ND (1.0)	---	---	---	---	---
	01/08/13		0.54	ND (1.0)	---	980	---	---	---
	02/20/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	03/12/13		1.2	1.8	---	---	---	---	---
	04/02/13		1.4	1.3	---	---	---	---	---
	05/07/13		2.0	2.3	---	---	---	---	---
	06/04/13		1.8	1.6	---	---	---	---	---
	07/02/13		1.6	1.4	---	1,000	---	---	---
	08/01/13		2.2	2.4	---	---	---	---	---
	09/13/13		2.0	1.9	---	---	---	---	---
	10/01/13		1.9	2.0	---	---	---	---	---
	11/07/13		1.7	1.5	---	---	---	---	---
	12/10/13		0.53	ND (1.0)	---	---	---	---	---
	01/07/14		0.26	ND (1.0)	---	---	---	---	---
	02/05/14		0.41	1.0	---	---	---	---	---
	03/19/14		1.4J	1.9	---	---	---	---	---
	03/19/14	FD	1.9J	1.9	---	---	---	---	---
	04/03/14		1.9	1.9	---	---	---	---	---
27-40	09/14/06		2.2	1.9	---	---	---	---	---
	12/07/06		2.0	1.9	---	---	---	---	---
	02/15/07		2.0	2.3	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/13/07		2.1	1.8	---	---	---	---	---
	06/20/07		2.1	1.9	---	---	---	---	---
	08/16/07		1.9	2.1	---	---	---	---	---
	10/15/07		2.1	1.9	---	---	---	---	---
	12/07/07		2.0	2.1	---	1,060	---	---	---
	02/13/08		2.0	2.0	---	---	---	---	---
	04/10/08		1.9	2.2	---	---	---	---	---
	04/10/08	FD	1.9	2.2	---	---	---	---	---
	06/12/08		1.8	1.8	4.73	1,280	---	---	---
	08/06/08		1.8	1.6	---	---	---	---	---
	08/26/08		---	---	---	1,290	---	---	---
	11/06/08		1.8	1.2	---	---	---	---	---
	02/05/09		1.6	1.7	---	1,430	---	---	---
	05/14/09		1.6	1.8	---	---	---	---	---
	08/06/09		1.7	1.8	---	1,530	---	---	---
	11/12/09		1.3	1.7	---	---	---	---	---
	02/11/10		1.4	1.0	---	1,400	---	---	---
	05/13/10		1.9	2.0	---	---	---	---	---
	08/05/10		2.0	1.7	---	---	---	---	---
	08/20/10		---	---	---	1,260	---	---	---
	10/28/10		2.1	1.9	---	---	---	---	---
	01/21/11		1.7	1.9	---	---	---	---	---
	02/07/11		1.5	1.6	---	778	---	---	---
	03/08/11		1.9	1.9	---	---	---	---	---
	04/07/11		1.9	2.2	---	---	---	---	---
	05/11/11		2.0	2.5	---	---	---	---	---
	06/07/11		2.0	2.0	---	---	---	---	---
	07/07/11		2.0	1.7	---	---	---	---	---
	08/17/11		1.8	1.8	---	---	---	---	---
	09/13/11		2.0	2.0	---	---	---	---	---
	09/28/11		---	---	---	1,170	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/04/11		1.8	2.2	---	---	---	---	---
	11/14/11		1.9	1.9	---	---	---	---	---
	01/03/12		1.6	1.6	---	---	---	---	---
	02/24/12		2.0	1.7	---	1,300	---	---	---
	03/28/12		2.0	1.9	---	---	---	---	---
	04/16/12		1.9	1.7	---	---	---	---	---
	05/16/12		1.9	1.7	---	---	---	---	---
	06/14/12		2.0	1.8	---	---	---	---	---
	07/12/12		1.9	1.7	---	1,200	---	---	---
	08/09/12		2.1	1.5	---	---	---	---	---
	09/06/12		2.1	1.8	---	---	---	---	---
	10/02/12		2.0	1.9	---	---	---	---	---
	11/08/12		2.0	2.0	---	---	---	---	---
	12/04/12		1.9	2.1	---	---	---	---	---
	01/08/13		2.0	1.9	---	1,100	---	---	---
	02/20/13		2.0	1.6	---	---	---	---	---
	03/12/13		2.0	2.2	---	---	---	---	---
	04/02/13		2.0	1.7	---	---	---	---	---
	05/07/13		2.0	1.9	---	---	---	---	---
	06/04/13		1.9	1.4	---	---	---	---	---
	07/02/13		1.9	1.8	---	1,200	---	---	---
	08/01/13		2.2	2.0	---	---	---	---	---
	09/13/13		1.9	1.8	---	---	---	---	---
	10/01/13		2.0	2.0	---	---	---	---	---
	11/07/13		1.9	1.6	---	---	---	---	---
	12/10/13		1.5	1.4	---	---	---	---	---
	01/07/14		1.7	1.6	---	---	---	---	---
	01/07/14	FD	1.7	1.6	---	---	---	---	---
	02/05/14		2.0	1.9	---	---	---	---	---
	03/19/14		2.0	1.4	---	---	---	---	---
	04/03/14		1.9	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
27-41	04/10/08		0.83	1.3	---	---	---	---	---
27-42	02/19/08		0.36	1.5	---	---	---	---	---
	03/03/11		0.38	ND (1.0)	---	---	---	---	---
	04/04/11		0.28	ND (1.0)	---	---	---	---	---
	07/07/11		0.59	ND (1.0)	---	---	---	---	---
	10/06/11		0.6	ND (1.0)	---	---	---	---	---
	01/04/12		0.55	ND (1.0)	---	---	---	---	---
	04/04/12		0.46	ND (1.0)	---	---	---	---	---
	07/10/12		0.53	ND (1.0)	---	---	---	---	---
	10/03/12		0.55	ND (1.0)	---	---	---	---	---
	01/17/13		0.43	ND (1.0)	---	---	---	---	---
	04/02/13		0.22	ND (1.0)	---	---	---	---	---
	07/03/13		0.072	ND (1.0)	---	---	---	---	---
	10/02/13		0.24	ND (1.0)	---	---	---	---	---
	10/02/13	FD	0.24	ND (1.0)	---	---	---	---	---
	01/06/14		0.4	ND (1.0)	---	---	---	---	---
	04/09/14		0.47	ND (1.0)	---	---	---	---	---
	07/02/14		0.24	ND (1.0)	---	---	---	---	---
27-43	02/19/08		1.4	1.7	---	---	---	---	---
	03/03/11		1.4	1.1	---	---	---	---	---
	04/04/11		1.5	1.7	---	---	---	---	---
	07/07/11		1.4	1.2	---	---	---	---	---
	10/06/11		1.5	1.4	---	---	---	---	---
	01/09/12		1.3	1.1	---	---	---	---	---
	04/04/12		1.3	1.2	---	---	---	---	---
	07/10/12		1.3	1.2	---	---	---	---	---
	09/26/12		1.5	1.3	9.20	740	17.2	5.41	19.6
	10/03/12		1.4	1.4	---	---	---	---	---
	04/02/13		1.4	1.2	---	---	---	---	---
	04/02/13	FD	1.4	1.2	---	---	---	---	---
	07/03/13		1.4	1.2	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/02/13		1.4	1.5	---	---	---	---	---
	01/06/14		1.4	1.3	---	---	---	---	---
	04/09/14		1.5	2.3	---	---	---	---	---
	07/15/14		1.4	1.4	6.60	540	18.9J	4.68	11.0
27-48	03/09/11		1.2	1.5	---	---	---	---	---
	04/04/11		1.3	1.4	---	---	---	---	---
	07/08/11		1.1	ND (1.0)	---	---	---	---	---
	10/06/11		1.0	1.3	---	---	---	---	---
	01/17/12		0.75	ND (1.0)	---	---	---	---	---
	05/09/12		0.68	ND (1.0)	---	---	---	---	---
	07/10/12		0.59	ND (1.0)	---	---	---	---	---
	07/10/12	FD	0.61	ND (1.0)	---	---	---	---	---
	10/04/12		0.56	ND (1.0)	---	---	---	---	---
	01/09/13		0.58	ND (1.0)	---	---	---	---	---
	04/03/13		0.67	ND (1.0)	---	---	---	---	---
	07/02/13		0.68	ND (1.0)	---	---	---	---	---
	10/03/13		0.66	ND (1.0)	---	---	---	---	---
	01/09/14		0.28	ND (1.0)	---	---	---	---	---
	04/02/14		0.61	ND (1.0)	---	---	---	---	---
	07/02/14		0.52	ND (1.0)	---	---	---	---	---
27-49	03/09/11		2.0	2.0	---	---	---	---	---
	04/04/11		1.9	2.1	---	---	---	---	---
	07/08/11		1.7	1.5	---	---	---	---	---
	07/08/11	FD	1.8	1.5	---	---	---	---	---
	10/06/11		1.8	2.5	---	---	---	---	---
	01/17/12		1.5	1.4	---	---	---	---	---
	05/09/12		1.5	1.5	---	---	---	---	---
	07/10/12		1.2	1.2	---	---	---	---	---
	10/04/12		1.2	1.3	---	---	---	---	---
	01/09/13		0.25	ND (1.0)	---	---	---	---	---
	04/03/13		1.8	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/02/13		1.7	1.7	---	---	---	---	---
	10/03/13		1.8	1.6	---	---	---	---	---
	01/09/14		1.9	1.8	---	---	---	---	---
	04/02/14		2.0	1.8	---	---	---	---	---
	07/02/14		1.6	1.7	---	---	---	---	---
28-05	10/15/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/15/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
28-06	11/30/11		0.76	1.2	---	---	---	---	---
	01/10/12		0.84	ND (1.0)	---	---	---	---	---
	04/12/12		0.27	ND (1.0)	---	---	---	---	---
	07/13/12		1.0	1.1	---	---	---	---	---
	10/12/12		0.96	1.5	---	---	---	---	---
	01/09/13		0.55	ND (1.0)	---	---	---	---	---
	04/04/13		0.68	ND (1.0)	---	---	---	---	---
	04/04/13	FD	0.69	ND (1.0)	---	---	---	---	---
	07/09/13		0.07	ND (1.0)	---	---	---	---	---
	01/13/14		0.4	ND (1.0)	---	---	---	---	---
28-08	12/02/11		2.5	3.5	---	---	---	---	---
	01/20/12		2.0	2.0	---	---	---	---	---
	04/11/12		2.5	2.0	---	---	---	---	---
	04/11/12	FD	2.5	2.0	---	---	---	---	---
	07/10/12		2.3	1.8	---	---	---	---	---
	10/04/12		2.3	2.1	---	---	---	---	---
	10/04/12	FD	2.3	2.2	---	---	---	---	---
	01/18/13		2.2	2.1	---	---	---	---	---
	07/11/13		2.3	2.0	---	---	---	---	---
	07/11/13	FD	2.4	2.0	---	---	---	---	---
	10/03/13		2.5	2.6	---	---	---	---	---
28-09	11/11/11		1.9	2.2	---	---	---	---	---
	01/10/12		1.7	1.7	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/11/12		1.5	1.5	---	---	---	---	---
	07/12/12		2.1	2.0	---	---	---	---	---
	09/27/12		2.0	2.0	15.0	830	13.5	ND (4.00)	7.93
	12/26/12		1.9	2.3	16.0	810	8.00	ND (4.00)	6.82
	12/26/12		1.9	1.8	---	---	---	---	---
	03/12/13		2.0	2.5	---	---	---	---	---
	04/09/13		3.1	3.0	---	---	---	---	---
	07/09/13		2.3	2.0	---	---	---	---	---
	10/03/13		1.1	1.3	---	---	---	---	---
	10/03/13	FD	1.3	1.4	---	---	---	---	---
	01/14/14		2.2	2.2	---	---	---	---	---
	04/02/14		2.2	2.0	---	---	---	---	---
	07/14/14		2.1	2.0	---	---	---	---	---
	07/14/14	FD	2.1	2.0	---	---	---	---	---
28-16	11/30/11		0.62	1.0	---	---	---	---	---
	01/06/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/16/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	09/06/12		0.92	1.0	5.40	870	7.05	ND (4.00)	6.23
	10/02/12		0.37	ND (1.0)	---	---	---	---	---
	01/09/13		0.3	ND (1.0)	---	---	---	---	---
	01/09/13	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	04/02/13		0.23	ND (1.0)	---	---	---	---	---
	07/10/13		0.57	ND (1.0)	---	---	---	---	---
	10/02/13		0.45	ND (1.0)	---	---	---	---	---
	01/09/14		0.23	ND (1.0)	---	---	---	---	---
	04/03/14		0.13	ND (1.0)	---	---	---	---	---
	04/03/14	FD	0.12	ND (1.0)	---	---	---	---	---
	07/02/14		0.8	1.2	---	---	---	---	---
28-17	03/09/11		0.68	ND (1.0)	---	---	---	---	---
	04/04/11		0.69	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	08/17/11		0.62	ND (1.0)	---	---	---	---	---
	10/05/11		0.57	ND (1.0)	---	---	---	---	---
	01/25/12		0.54	ND (1.0)	---	---	---	---	---
	05/09/12		0.59	ND (1.0)	---	---	---	---	---
	07/10/12		0.56	ND (1.0)	---	---	---	---	---
	10/01/12		0.57	ND (1.0)	---	---	---	---	---
	01/15/13		0.57	1.1	---	---	---	---	---
	04/03/13		0.47	ND (1.0)	---	---	---	---	---
	07/08/13		0.6	ND (1.0)	---	---	---	---	---
	10/03/13		0.45	ND (1.0)	---	---	---	---	---
	01/09/14		0.64	ND (1.0)	---	---	---	---	---
	01/09/14	FD	0.66	ND (1.0)	---	---	---	---	---
	04/02/14		0.62	ND (1.0)	---	---	---	---	---
	07/02/14		0.44	ND (1.0)	---	---	---	---	---
28-19	12/15/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	06/13/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/04/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/09/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/10/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	05/08/14		ND (0.06)	ND (1.0)	---	---	---	---	---
28-20	08/10/06		1.1	1.1	---	---	---	---	---
	01/06/11		1.3	1.8	---	---	---	---	---
	12/01/11		1.3	1.2	---	---	---	---	---
	01/13/12		1.1	1.1	---	---	---	---	---
	04/24/12		1.2	1.0	---	---	---	---	---
	05/22/12		1.1	1.4	ND (0.50)	581	9.12	ND (4.00)	5.09
	07/18/12		0.48	ND (1.0)	---	---	---	---	---
	10/08/12		1.2	1.1	---	---	---	---	---
	01/10/13		1.2	1.1	---	---	---	---	---
	04/10/13		1.3	1.3	---	---	---	---	---
	07/03/13		1.3	1.1	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/03/13		1.2	1.3	---	---	---	---	---
	01/06/14		1.2	1.2	---	---	---	---	---
	04/02/14		1.2	1.2	---	---	---	---	---
	07/15/14		0.74	1.0	---	---	---	---	---
28-21	04/11/07		5.6	6.8	---	---	---	---	---
	11/03/11		2.7	2.7	---	---	---	---	---
	01/10/12		2.9	2.8	---	---	---	---	---
	04/11/12		0.53	ND (1.0)	---	---	---	---	---
	06/28/12		2.6	2.1	34.0	1,600	29.1	11.1	25.8
	07/18/12		1.8	1.6	---	---	---	---	---
	07/18/12	FD	1.8	1.7	---	---	---	---	---
	10/01/12		2.5	2.5	---	---	---	---	---
	01/07/13		8.6	8.0	---	---	---	---	---
	04/10/13		6.1	5.6	---	---	---	---	---
	07/01/13		4.0	3.4	---	---	---	---	---
	01/14/14		0.74	ND (1.0)	---	---	---	---	---
	04/09/14		1.8	1.8	---	---	---	---	---
	07/10/14		3.1	2.9	---	---	---	---	---
28-22	04/11/07		0.95	1.7	---	---	---	---	---
	11/03/11		1.2	1.4	---	---	---	---	---
28-25	12/21/10		2.3	2.7	---	---	---	---	---
	07/13/11		2.2	2.2	---	---	---	---	---
	10/06/11		2.2	2.2	---	---	---	---	---
	01/04/12		1.7	1.6	---	---	---	---	---
	04/05/12		2.0	1.9	---	---	---	---	---
	07/13/12		2.1	2.0	---	---	---	---	---
	10/02/12		2.0	2.0	---	---	---	---	---
	01/07/13		2.0	1.8	---	---	---	---	---
	04/08/13		2.0	2.0	---	---	---	---	---
	04/08/13	FD	2.0	1.9	---	---	---	---	---
	07/01/13		2.0	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/04/13		1.9	2.0	---	---	---	---	---
	01/07/14		2.0	1.9	---	---	---	---	---
	04/03/14		2.0	2.0	---	---	---	---	---
	07/01/14		1.8	1.9	---	---	---	---	---
28-28	03/08/11		1.2	1.2	---	---	---	---	---
	04/04/11		1.2	1.4	---	---	---	---	---
	08/16/11		1.1	1.1	---	---	---	---	---
	10/06/11		1.0	1.3	---	---	---	---	---
	10/06/11	FD	1.0	1.3	---	---	---	---	---
	01/04/12		0.81	ND (1.0)	---	---	---	---	---
	05/09/12		0.63	1.0	---	---	---	---	---
	07/10/12		0.96	ND (1.0)	---	---	---	---	---
	10/01/12		1.1	1.2	---	---	---	---	---
	01/15/13		0.89	1.1	---	---	---	---	---
	04/03/13		0.59	ND (1.0)	---	---	---	---	---
	07/08/13		0.79	ND (1.0)	---	---	---	---	---
	10/03/13		0.89	1.0	---	---	---	---	---
	10/03/13	FD	0.89	1.0	---	---	---	---	---
	01/09/14		1.2	1.1	---	---	---	---	---
	04/02/14		0.95	1.0	---	---	---	---	---
28-31	06/21/11		0.36	ND (1.0)	---	---	---	---	---
28-36	07/13/11		1.0	2.2	---	---	---	---	---
	11/11/11		0.81	3.0	---	---	---	---	---
	01/20/12		0.76	2.3	---	---	---	---	---
	04/25/12		0.65	2.5	---	---	---	---	---
	07/10/12		2.3	2.7	---	---	---	---	---
	09/27/12		0.89	2.6	0.40	450	7.19	ND (4.00)	7.40
	10/04/12		1.7	2.9	---	---	---	---	---
	01/09/13		0.24	2.2	---	---	---	---	---
	04/04/13		2.1	3.2	---	---	---	---	---
	07/01/13		1.7	2.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/03/13		2.1	2.8	---	---	---	---	---
	01/14/14		0.8	2.3	---	---	---	---	---
	04/02/14		0.99	2.4	---	---	---	---	---
	04/02/14	FD	0.96	2.4	---	---	---	---	---
	07/15/14		1.2	2.7	---	---	---	---	---
28-40	11/03/11		1.2	1.1	---	---	---	---	---
	01/04/12		1.1	1.1	---	---	---	---	---
	04/05/12		1.2	1.0	---	---	---	---	---
	07/10/12		1.0	ND (1.0)	---	---	---	---	---
	10/02/12		1.2	1.1	---	---	---	---	---
	10/02/12	FD	1.3	1.2	---	---	---	---	---
	01/07/13		1.2	1.1	---	---	---	---	---
	04/02/13		1.3	1.1	---	---	---	---	---
	07/01/13		1.1	ND (1.0)	---	---	---	---	---
	10/04/13		1.2	1.1	---	---	---	---	---
	10/04/13	FD	1.1	1.1	---	---	---	---	---
	01/07/14		1.2	1.2	---	---	---	---	---
	04/02/14		1.2	1.1	---	---	---	---	---
	07/01/14		1.1	1.2	---	---	---	---	---
28-42	12/02/11		1.3	1.4	---	---	---	---	---
	01/06/12		1.3	ND (1.0)	---	---	---	---	---
	05/10/12		1.1	ND (1.0)	---	---	---	---	---
28-51	12/02/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	12/02/11	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	01/09/12		0.099	ND (1.0)	---	---	---	---	---
	03/13/13		0.13	ND (1.0)	---	---	---	---	---
	05/08/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/03/13		0.064	ND (1.0)	---	---	---	---	---
	10/03/13		0.28	ND (1.0)	---	---	---	---	---
	01/13/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/04/14		ND (0.06)	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/10/14		0.098	ND (1.0)	---	---	---	---	---
28-62	12/01/11		0.22	ND (1.0)	---	---	---	---	---
	01/20/12		0.42	ND (1.0)	---	---	---	---	---
	01/09/13		0.11	ND (1.0)	---	---	---	---	---
	04/10/13		0.25	ND (1.0)	---	---	---	---	---
	07/08/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/03/13		0.35	ND (1.0)	---	---	---	---	---
	01/15/14		ND (0.06)	ND (1.0)	---	---	---	---	---
28-75	10/11/12		0.32	ND (1.0)	---	---	---	---	---
	01/10/13		1.5	1.6	---	---	---	---	---
	04/04/13		1.7	1.8	---	---	---	---	---
	07/10/13		1.3	1.1	---	---	---	---	---
28-76	10/09/12		0.91	ND (1.0)	---	---	---	---	---
28-78	03/11/13		1.5	1.4	---	---	---	---	---
	07/15/13		1.5	1.4	---	---	---	---	---
	10/15/13		1.5	1.2	---	---	---	---	---
	01/16/14		1.5	1.3	---	---	---	---	---
	04/11/14		1.6	1.5	---	---	---	---	---
	07/10/14		1.4	1.4	---	---	---	---	---
	07/10/14	FD	1.5	1.4	---	---	---	---	---
28-81	03/05/13		1.6	1.7	---	---	---	---	---
	05/08/13		1.6	1.6	---	---	---	---	---
	07/18/13		2.2	2.0	---	---	---	---	---
	07/18/13	FD	2.2	2.0	---	---	---	---	---
28-82	03/05/13		1.6	1.3	---	---	---	---	---
	04/08/13		1.7	1.5	---	---	---	---	---
	07/01/13		1.6	1.3	---	---	---	---	---
	10/07/13		1.8	1.7	---	---	---	---	---
30E-01	10/19/06		1.2	1.2	---	---	---	---	---
	08/27/09		1.5	1.5	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	12/07/10		1.7	2.0	---	---	---	---	---
	03/10/11		1.9	1.8	---	---	---	---	---
	09/06/11		1.8	2.1	---	---	---	---	---
	11/18/11		1.9	1.9	---	---	---	---	---
	01/03/12		2.0	2.0	---	---	---	---	---
	04/03/12		1.7	1.6	---	---	---	---	---
	07/12/12		1.6	1.7	---	---	---	---	---
	09/05/12		1.6	1.5	0.33	290	ND (3.00)	ND (4.00)	2.33
	10/02/12		1.7	1.6	---	---	---	---	---
	01/09/13		2.0	1.5	---	---	---	---	---
	01/09/13	FD	2.0	1.5	---	---	---	---	---
	04/02/13		1.6	1.3	---	---	---	---	---
	07/08/13		1.8	1.6	---	---	---	---	---
	10/02/13		1.3	1.3	---	---	---	---	---
	01/10/14		1.7	1.7	---	---	---	---	---
	01/10/14	FD	1.7	1.7	---	---	---	---	---
	04/02/14		1.5	1.3	---	---	---	---	---
	07/08/14		1.8	1.8	---	---	---	---	---
30E-11	02/06/12		ND (0.06)	ND (1.0)	---	---	---	---	---
34-06	01/17/06		ND (0.2)	ND (1.0)	---	---	---	---	---
	01/17/06	FD	ND (0.2)	ND (1.0)	---	---	---	---	---
	12/06/07		ND (0.2)	ND (1.0)	---	304	---	---	---
	12/21/10		ND (0.2)	ND (1.0)	---	---	---	---	---
	03/10/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	08/17/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/29/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/18/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	05/09/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/16/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/03/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/03/12	FD	ND (0.06)	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	01/16/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/01/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/12/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/04/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/09/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/04/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/17/14		ND (0.06)	ND (1.0)	ND (0.05)	300	ND (3.00)	ND (4.00)	ND (0.67)
34-38	01/17/06		ND (0.2)	ND (1.0)	ND (0.20)	288	---	---	---
	12/06/07		---	---	---	242	---	---	---
	08/05/09		ND (0.2)	ND (1.0)	---	---	---	---	---
	01/12/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	07/06/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/29/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/10/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	05/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/12/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/05/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/11/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/03/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/03/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/13/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/13/14	FD	ND (0.06)	ND (1.0)	---	---	---	---	---
	04/16/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/16/14		ND (0.06)	ND (1.0)	0.16	270	ND (3.00)	ND (4.00)	ND (0.67)
34-48	08/22/07		3.3	3.3	---	---	---	---	---
34-50	08/17/11		1.0	1.0	---	---	---	---	---
	11/30/11		1.0	1.2	---	---	---	---	---
	08/23/12		1.0	ND (1.0)	0.37	300	6.82	ND (4.00)	5.12
	11/12/12		0.96	ND (1.0)	---	---	---	---	---
	01/11/13		0.97	ND (1.0)	---	---	---	---	---
	04/01/13		1.0	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/10/13		0.99	ND (1.0)	---	---	---	---	---
	10/04/13		0.93	ND (1.0)	---	---	---	---	---
	01/15/14		1.0	1.0	---	---	---	---	---
	04/04/14		0.87	ND (1.0)	---	---	---	---	---
	07/14/14		0.97	1.0	---	---	---	---	---
	07/14/14	FD	0.96	ND (1.0)	---	---	---	---	---
	07/16/14		---	---	0.40	310	5.11	ND (4.00)	4.80
	07/16/14	FD	---	---	0.39	330	7.60	ND (4.00)	5.00
34-58	01/03/11		ND (0.2)	ND (1.0)	---	---	---	---	---
	11/29/11		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/17/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	05/02/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/11/12		0.1	ND (1.0)	0.12	280	---	---	ND (1.00)
	12/11/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	03/13/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	04/10/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/11/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/09/14		ND (0.06)	ND (1.0)	---	---	---	---	---
	07/09/14		0.22	ND (1.0)	0.16	300	ND (3.00)	ND (4.00)	0.72
34-63	12/07/12		ND (0.06)	ND (1.0)	---	---	---	---	---
	01/08/13		0.14	ND (1.0)	---	---	---	---	---
	04/03/13		0.3	ND (1.0)	---	---	---	---	---
	07/02/13		ND (0.06)	ND (1.0)	---	---	---	---	---
	10/02/13		1.3	1.4	---	---	---	---	---
	01/15/14		0.84	ND (1.0)	---	---	---	---	---
	04/10/14		0.25	ND (1.0)	---	---	---	---	---
	07/08/14		0.36	ND (1.0)	---	---	---	---	---
34-77	11/22/11		1.0	1.2	---	---	---	---	---
	01/10/12		0.98	ND (1.0)	---	---	---	---	---
	04/05/12		0.62	ND (1.0)	---	---	---	---	---
	07/16/12		1.1	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/05/12		1.0	1.1	---	---	---	---	---
	01/09/13		0.74	ND (1.0)	---	---	---	---	---
	04/04/13		1.2	1.2	---	---	---	---	---
	07/10/13		1.2	ND (1.0)	---	---	---	---	---
	10/04/13		1.1	1.1	---	---	---	---	---
	10/04/13	FD	1.1	1.1	---	---	---	---	---
	01/07/14		0.99	1.1	---	---	---	---	---
	04/01/14		1.2	1.1	---	---	---	---	---
	07/08/14		1.1	1.1	---	---	---	---	---
36-17	02/19/02		0.95	1.8	---	---	---	---	---
	02/19/02	FD	0.91	1.9	---	---	---	---	---
	11/21/11		1.0	1.1	---	---	---	---	---
	01/03/12		0.98	ND (1.0)	---	---	---	---	---
	05/09/12		1.0	ND (1.0)	---	---	---	---	---
	07/16/12		0.92	ND (1.0)	---	---	---	---	---
	10/02/12		1.0	1.0	---	---	---	---	---
	01/07/13		0.86	ND (1.0)	---	---	---	---	---
	04/02/13		0.89	ND (1.0)	---	---	---	---	---
	07/01/13		1.1	ND (1.0)	---	---	---	---	---
	10/02/13		1.1	1.0	---	---	---	---	---
	01/14/14		0.87	ND (1.0)	---	---	---	---	---
	04/01/14		0.96	ND (1.0)	---	---	---	---	---
	07/02/14		1.1	1.1	---	---	---	---	---
36-26	06/09/10		2.1	1.8	---	---	---	---	---
	01/05/11		1.6	2.0	---	---	---	---	---
	10/19/11		2.1	2.7	---	---	---	---	---
	01/10/12		2.0	2.1	---	---	---	---	---
	04/04/12		1.6	1.7	---	---	---	---	---
	07/16/12		1.2	1.7	---	---	---	---	---
	10/04/12		1.7	1.8	---	---	---	---	---
	01/16/13		1.6	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	04/10/13		2.1	2.2	---	---	---	---	---
	07/02/13		2.1	2.2	---	---	---	---	---
	10/01/13		1.2	2.0	---	---	---	---	---
	01/15/14		1.7	2.0	---	---	---	---	---
	04/03/14		1.5	1.8	---	---	---	---	---
	04/03/14	FD	1.4	1.8	---	---	---	---	---
	07/02/14		1.9	1.9	---	---	---	---	---
36-31	07/09/12		1.9	1.6	---	---	---	---	---
	10/18/12		1.9	1.8	---	---	---	---	---
	01/17/13		1.6	1.8	---	---	---	---	---
	01/17/13	FD	1.7	1.9	---	---	---	---	---
	04/02/13		1.5	1.3	---	---	---	---	---
	07/02/13		1.5	1.5	---	---	---	---	---
	10/02/13		1.3	1.6	16.0	870	19.7	ND (4.00)	21.3
	10/02/13		1.5	1.6	---	---	---	---	---
	04/01/14		1.4	1.4	---	---	---	---	---
	07/10/14		1.3	1.4	15.0	840	19.4J	5.32	19.0
36-41	12/13/10		1.7	2.2	---	---	---	---	---
	11/29/11		0.56	1.3	---	---	---	---	---
	11/29/11	FD	0.6	ND (1.0)	---	---	---	---	---
	01/11/12		1.6	1.4	---	---	---	---	---
	04/04/12		1.1	ND (1.0)	---	---	---	---	---
	04/04/12	FD	1.1	1.1	---	---	---	---	---
	07/13/12		0.94	ND (1.0)	---	---	---	---	---
	10/08/12		1.2	1.1	---	---	---	---	---
	01/14/13		0.63	ND (1.0)	---	---	---	---	---
	04/02/13		1.4	1.1	---	---	---	---	---
	07/02/13		0.64	ND (1.0)	---	---	---	---	---
	10/03/13		0.88	ND (1.0)	---	---	---	---	---
	01/15/14		1.5	1.4	---	---	---	---	---
	04/01/14		1.4	1.3	9.00	840	33.8	9.61J	25.0

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/09/14		1.5	1.5	13.0	1,000	40.2	4.31	29.0
36-43	11/16/11		0.63	ND (1.0)	---	---	---	---	---
	01/03/12		0.53	ND (1.0)	---	---	---	---	---
	05/09/12		0.62	ND (1.0)	---	---	---	---	---
	07/16/12		0.56	ND (1.0)	---	---	---	---	---
	07/16/12	FD	0.5	ND (1.0)	---	---	---	---	---
	10/02/12		0.6	ND (1.0)	---	---	---	---	---
	01/07/13		0.39	ND (1.0)	---	---	---	---	---
	04/02/13		0.52	ND (1.0)	---	---	---	---	---
	07/01/13		0.52	ND (1.0)	---	---	---	---	---
	10/02/13		0.58	ND (1.0)	---	---	---	---	---
	10/02/13	FD	0.54	ND (1.0)	---	---	---	---	---
	03/07/14		0.55	ND (1.0)	---	---	---	---	---
	04/01/14		0.55	ND (1.0)	---	---	---	---	---
	07/02/14		0.53	ND (1.0)	---	---	---	---	---
BGS-05	01/31/06		0.96	1.1	---	670	---	---	---
	04/25/06		0.76	ND (1.0)	---	910	---	---	---
BGS-25	01/30/06		0.48	ND (1.0)	10.9	250	---	---	---
	04/26/06		0.77	1.2	10.4	940	---	---	---
	07/26/06		1.3J	1.5	11.0	950	---	---	---
	10/23/06		0.99	1.2	11.8	925	---	---	---
	10/06/11		1.5	1.7	---	---	---	---	---
	10/19/11		1.6	1.9	---	---	---	---	---
	01/11/12		1.4	1.3	---	---	---	---	---
	04/06/12		1.5	1.5	---	---	---	---	---
	07/19/12		1.5	1.4	---	---	---	---	---
	07/19/12	FD	1.5	1.4	---	---	---	---	---
	10/18/12		1.5	1.4	---	---	---	---	---
	01/09/13		1.2	1.2	---	---	---	---	---
	04/04/13		1.1	1.3	---	---	---	---	---
	04/04/13	FD	1.1	1.3	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	07/11/13		1.8	1.5	---	---	---	---	---
	10/04/13		1.7	1.7	---	---	---	---	---
	01/09/14		1.5	1.6	---	---	---	---	---
	04/04/14		1.9	1.8	---	---	---	---	---
	07/10/14		2.0	1.9	---	---	---	---	---
BGS-27	02/02/06		1.6	1.9	---	1,180	---	---	---
	04/25/06		1.4	1.7	---	1,180	---	---	---
	07/26/06		1.4J	1.4	---	1,140	---	---	---
	10/24/06		1.3	1.4	---	1,090	---	---	---
	11/16/11		1.0	ND (1.0)	---	---	---	---	---
	01/03/12		0.74	ND (1.0)	---	---	---	---	---
	05/09/12		0.86	ND (1.0)	---	---	---	---	---
	07/16/12		0.48	ND (1.0)	---	---	---	---	---
	10/02/12		0.92	ND (1.0)	---	---	---	---	---
	01/09/13		1.1	1.0	---	---	---	---	---
	04/02/13		1.1	1.0	---	---	---	---	---
	07/01/13		1.1	1.0	---	---	---	---	---
	07/01/13	FD	1.1	1.1	---	---	---	---	---
	10/02/13		1.3	1.3	---	---	---	---	---
	01/10/14		1.2	ND (1.0)	---	---	---	---	---
	04/01/14		0.94	1.0	---	---	---	---	---
	07/02/14		0.92	ND (1.0)	---	---	---	---	---
BGS-46	09/28/06		2.2	2.4	ND (0.50)	190	---	---	---
	11/15/06		2.4	1.8	---	245	---	---	---
	10/27/10		2.0	1.8	---	---	---	---	---
	10/27/10	FD	1.8	1.5	---	---	---	---	---
	02/09/11		1.9	2.0	---	---	---	---	---
	04/06/11		1.9	1.9	---	---	---	---	---
	07/08/11		2.0	1.8	---	---	---	---	---
	07/08/11	FD	2.0	1.8	---	---	---	---	---
	10/06/11		2.0	1.8	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	01/03/12		1.8	1.7	---	---	---	---	---
	04/03/12		1.8	1.7	---	---	---	---	---
	04/03/12	FD	1.8	1.7	---	---	---	---	---
	07/17/12		1.8	1.9	---	---	---	---	---
	10/02/12		1.6	1.6	---	---	---	---	---
	10/02/12	FD	1.7	1.7	---	---	---	---	---
	01/08/13		1.7	1.6	---	---	---	---	---
	04/04/13		1.6	1.7	---	---	---	---	---
	07/09/13		1.7	1.4	---	---	---	---	---
	10/02/13		1.5	1.4	---	---	---	---	---
	01/09/14		1.2	1.1	---	---	---	---	---
	04/04/14		0.74	ND (1.0)	---	---	---	---	---
	04/04/14	FD	0.74	1.0	---	---	---	---	---
	07/09/14		1.2	1.2	---	---	---	---	---
BGS-48	09/28/06		0.58J	ND (1.0)	ND (0.50)	230	---	---	---
	10/19/06		0.86	ND (1.0)	---	---	---	---	---
	08/06/09		ND (0.2)	ND (1.0)	---	---	---	---	---
	12/08/10		0.25	ND (1.0)	---	---	---	---	---
	03/10/11		0.28	ND (1.0)	---	---	---	---	---
	09/06/11		0.49	ND (1.0)	---	---	---	---	---
	11/18/11		0.54	ND (1.0)	---	---	---	---	---
	01/03/12		0.52	ND (1.0)	---	---	---	---	---
	01/03/12	FD	0.49	ND (1.0)	---	---	---	---	---
	04/03/12		0.21	ND (1.0)	---	---	---	---	---
	07/12/12		0.13	ND (1.0)	---	---	---	---	---
	10/02/12		0.5	ND (1.0)	---	---	---	---	---
	01/09/13		0.18	ND (1.0)	---	---	---	---	---
	01/09/13	FD	0.37	ND (1.0)	---	---	---	---	---
	04/02/13		0.087	ND (1.0)	---	---	---	---	---
	05/06/13		0.23	ND (1.0)	0.46	260	ND (3.00)	ND (4.00)	1.92
	07/08/13		0.13	ND (1.0)	---	---	---	---	---

Table F-3

Historical Analytical Results for Domestic and Agricultural Wells
Third Quarter 2014 Agricultural Treatment Units Monitoring Report
Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Location	Sample Date	Sample Type	Hexavalent Chromium µg/L	Total Dissolved Chromium µg/L	Nitrate as Nitrogen mg/L	Total Dissolved Solids mg/L	Gross Alpha pCi/L	Gross Beta pCi/L	Uranium, Dissolved pCi/L
	10/02/13		0.082	ND (1.0)	---	---	---	---	---
	01/10/14		0.071	ND (1.0)	---	---	---	---	---
	04/02/14		0.062	ND (1.0)	---	---	---	---	---
	07/08/14		ND (0.06)	ND (1.0)	---	---	---	---	---

During the Second Quarter 2014 monitoring event, laboratory analysis of gross alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon review of the results, it was determined that the gross alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in this document; however, only the USEPA Method 900.0 gross alpha results will be used for future evaluations. Second Quarter 2014 USEPA Method 7110C gross alpha data is indicated by the S qualifier code.

-- = not analyzed

µg/L = micrograms per liter

FD = field duplicate

J = concentration is estimated based on review of quality control criteria and data validation

mg/L = milligrams per liter

ND (x.x) = not detected at or above the reporting limit shown

pCi/L = picocuries per liter

S = screening

Table F-4

Historical Field Parameters for Selected Domestic Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	pH	Specific Conductance (uS/cm)	Total Dissolved Solids (TDS) (mg/L)
22-108	01/16/2013	7.62	2,781	1,801
	07/02/2013	7.55	2,735	1,794
	10/01/2013	7.66	2,769	2,116
	01/08/2014	7.52	2,731	1,791
	04/02/2014	7.46	3,105	2,020
	07/07/2014	7.05	3,003	1,950
22-39	01/03/2011	7.31	2,805	182
	07/06/2011	7.13	2,799	1,827
	09/13/2011	7.41	2,945	1,907
	10/05/2011	7.29	2,679	1,732
	11/07/2011	7.13	3,033	1,972
	01/05/2012	7.18	2,943	1,894
	04/11/2012	7.12	3,111	2,023
	07/09/2012	7.04	2,756	1,790
	10/02/2012	7.32	3,034	1,970
	01/08/2013	6.08	5,518	3,588
	04/01/2013	6.94	3,151	2,047
	07/02/2013	7.11	3,211	1,831
	10/02/2013	7.12	3,102	2,022
	01/08/2014	7.30	3,191	2,144
	04/02/2014	7.22	3,300	2,140
	07/01/2014	7.36	3,211	2,011
23-07	03/28/2003	7.94	3,660	nm
	11/14/2006	7.05	3,480	2,200
	01/07/2011	7.00	3,577	2,333
	03/07/2011	7.20	2,700	1,881
	04/26/2011	6.82	3,681	2,399
	07/13/2011	6.75	3,253	2,113
	10/05/2011	6.67	3,456	2,248
	01/12/2012	7.21	3,123	2,000
	04/13/2012	7.14	3,319	2,109
	07/13/2012	6.96	2,932	1,894
	10/16/2012	7.11	3,541	2,207
	03/12/2013	7.17	3,487	2,273
	01/24/2014	7.30	3,341	2,470
	04/04/2014	4.78 FQ	3,960	nm
	07/11/2014	7.03	3,359	2,180

Table F-4

Historical Field Parameters for Selected Domestic Wells

Third Quarter 2014 Agricultural Treatment Units Monitoring Report

Pacific Gas and Electric Company, Hinkley Compressor Station, Hinkley, California

Well ID	Sample Date	pH	Specific Conductance (uS/cm)	Total Dissolved Solids (TDS) (mg/L)
23-24	01/19/2010	6.64	5	3,224
	08/02/2010	7.28	6,044	nm
	10/27/2010	6.87	6,207	4,034
	02/09/2011	7.12	5,370	3,488
	04/05/2011	6.92	6,090	3,963
	07/13/2011	6.91	5,120	3,453
	10/05/2011	6.97	5,147	3,336
	11/07/2011	6.69	5,886	3,838
	01/09/2012	6.59	5,591	3,291
	04/20/2012	9.80	5,882	3,822
	07/10/2012	6.76	4,446	2,815
	10/01/2012	6.79	2,316	1,414
	01/08/2013	6.64	5,819	3,783
	07/01/2013	6.83	5,919	3,891
	10/08/2013	7.01	6,023	4,210
	04/07/2014	4.83 FQ	0.593 FQ	nm
07/07/2014	7.89	615	400	
23-28	01/10/2011	7.63	790	514
	04/06/2011	7.63	742	482
	08/16/2011	8.19	702	nm
	10/31/2011	7.08	734	476
	01/16/2012	7.41	627	403
	04/30/2012	7.65	716	466
	08/09/2012	7.45	756	492
	01/11/2013	7.48	975	657
	10/03/2013	7.43	1,018	1,120
	01/16/2014	7.75	718	460
	04/04/2014	7.65	955	620
	07/10/2014	7.38	771	501

uS/cm microsiemens per centimeter

FQ field measurement qualified as questionable due to reading outside expected range

mg/L milligrams per liter



September 16, 2014



Subject: Results of Water Well Sampling - July 2014

Well(s) #28-20 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 15, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-20. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-20** sampled on 07/15/2014:

- Total chromium was detected at a concentration of: 1.0 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 0.74 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-20 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-20

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-20	Aug-10-2006	1.06	1.09	100	50	NE
	Jan-06-2011	1.8	1.3	100	50	NE
	Dec-01-2011	1.2	1.3	100	50	NE
	Jan-13-2012	1.1	1.1	100	50	NE
	Apr-24-2012	1.0	1.2	100	50	NE
	Jul-18-2012	ND <1.0 (not detected)	0.48	100	50	NE
	Oct-08-2012	1.1	1.2	100	50	NE
	Jan-10-2013	1.1	1.2	100	50	NE
	Apr-10-2013	1.3	1.3	100	50	NE
	Jul-03-2013	1.1	1.3	100	50	NE
	Oct-03-2013	1.3	1.2	100	50	NE
	Jan-06-2014	1.2	1.2	100	50	NE
	Apr-02-2014	1.2	1.2	100	50	NE
	Jul-15-2014	1.0	0.74	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #BGS-46 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 9, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #BGS-46. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #BGS-46** sampled on 07/09/2014:

- Total chromium was detected at a concentration of: 1.2 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #BGS-46 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #BGS-46 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
BGS-46	Sep-28-2006	2.38	2.20	100	50	NE
	Nov-15-2006	1.81	2.44	100	50	NE
	Oct-27-2010	1.8	2.0	100	50	NE
	Feb-09-2011	2.0	1.9	100	50	NE
	Apr-06-2011	1.9	1.9	100	50	NE
	Jul-08-2011	1.8	2.0	100	50	NE
	Oct-06-2011	1.8	2.0	100	50	NE
	Jan-03-2012	1.7	1.8	100	50	NE
	Apr-03-2012	1.7	1.8	100	50	NE
	Jul-17-2012	1.9	1.8	100	50	NE
	Oct-02-2012	1.7	1.7	100	50	NE
	Jan-08-2013	1.6	1.7	100	50	NE
	Apr-04-2013	1.7	1.6	100	50	NE
	Jul-09-2013	1.4	1.7	100	50	NE
	Oct-02-2013	1.4	1.5	100	50	NE
	Jan-09-2014	1.1	1.2	100	50	NE
	Apr-04-2014	1.0	0.74	100	50	NE
Jul-09-2014	1.2	1.2	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #25-16 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 7, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #25-16. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #25-16** sampled on 07/07/2014:

- Total chromium was detected at a concentration of: 2.5 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #25-16 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #25-16 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
25-16	Dec-09-2010	2.7	2.3	100	50	NE
	Mar-04-2011	2.4	2.6	100	50	NE
	May-05-2011	2.2	2.3	100	50	NE
	Oct-24-2011	2.4	2.4	100	50	NE
	Jan-27-2012	2.1	2.2	100	50	NE
	May-09-2012	2.3	2.3	100	50	NE
	Jul-17-2012	2.3	2.3	100	50	NE
	Oct-05-2012	2.1	2.2	100	50	NE
	Jul-16-2013	2.2	2.3	100	50	NE
	Jun-02-2014	2.2	2.3	100	50	NE
Jul-07-2014	2.5	2.2	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Nitrate as Nitrogen
- Total Dissolved Solids
- Uranium, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-39, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-39

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-39	Jan-03-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jul-06-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Sep-13-2011	1.6	ND <0.20 (not detected)	100	50	NE
	Oct-05-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-07-2011	ND <1.0 (not detected)	0.14	100	50	NE
	Jan-05-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-11-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-09-2012	ND <1.0 (not detected)	0.064	100	50	NE
	Oct-02-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-08-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-01-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-02-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-08-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-01-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-39

			CA Drinking Water Standards: (1)				
			15	50	10	500/1000/1500 ‡,§	20
			Federal Drinking Water Standards: (2)				
			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-39	Jul-01-2014		19.9	4.0	11.0	2,400	30.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.


The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014



Subject: Results of Water Well Sampling - July 2014
Well(s) #28-21 

Dear 

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-21. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-21** sampled on 07/10/2014:

- Total chromium was detected at a concentration of: 2.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 3.1 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-21 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

Page 2

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-21

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-21	Apr-11-2007	6.83	5.61	100	50	NE
	Nov-03-2011	2.7	2.7	100	50	NE
	Jan-10-2012	2.8	2.9	100	50	NE
	Apr-11-2012	ND <1.0 (not detected)	0.53	100	50	NE
	Jul-18-2012	1.7	1.8	100	50	NE
	Oct-01-2012	2.5	2.5	100	50	NE
	Jan-07-2013	8.0	8.6	100	50	NE
	Apr-10-2013	5.6	6.1	100	50	NE
	Jul-01-2013	3.4	4.0	100	50	NE
	Jan-14-2014	ND <1.0 (not detected)	0.74	100	50	NE
	Apr-09-2014	1.8	1.8	100	50	NE
	Jul-10-2014	2.9	3.1	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

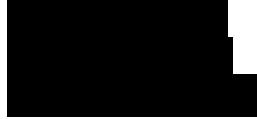
NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014



Subject: Results of Water Well Sampling – July 2014
Well(s) #15-05 and #15-06
Well(s) #15-08

Dear

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 8, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #15-05, #15-06, and #15-08. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #15-05** sampled on 07/08/2014:

- Total chromium was detected at a concentration of: 1.5 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.4 ppb

For **Well #15-06** sampled on 07/08/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.87 ppb

For **Well #15-08** sampled on 07/08/2014:

- Total chromium was detected at a concentration of: 1.3 ppb
- Hexavalent chromium was detected at a concentration of: 1.4 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.


Next Steps

The sampling results from July 2014 for your well ID(s) #15-05, #15-06, and #15-08 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Wells #15-05 and 15-06 [REDACTED]

Well #15-08 [REDACTED]

Well #15-12 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
15-05	Aug-11-2011	1.0 J	1.7 J	100	50	NE
	Oct-05-2011	1.9	1.9	100	50	NE
	Jan-04-2012	1.9	1.8	100	50	NE
	Apr-05-2012	1.4	1.5	100	50	NE
	Jul-11-2012	1.4	1.7	100	50	NE
	Oct-02-2012	1.6	1.6	100	50	NE
	Jan-07-2013	1.5	1.6	100	50	NE
	Apr-02-2013	1.4	1.5	100	50	NE
	Jul-01-2013	1.4	1.4	100	50	NE
	Oct-01-2013	1.8	1.8	100	50	NE
	Jan-07-2014	1.5	1.2	100	50	NE
	Apr-03-2014	1.4	1.4	100	50	NE
	Jul-08-2014	1.5	1.4	100	50	10
15-06	Aug-11-2011	1.1	1.3	100	50	NE
	Oct-05-2011	1.9	1.7	100	50	NE
	Jan-04-2012	ND <1.0 (not detected)	0.31	100	50	NE
	Apr-05-2012	ND <1.0 (not detected)	0.42	100	50	NE
	Jul-11-2012	ND <1.0 (not detected)	0.83	100	50	NE
	Oct-02-2012	1.1	1.0	100	50	NE
	Jan-07-2013	ND <1.0 (not detected)	0.15	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.076	100	50	NE
	Jul-01-2013	ND <1.0 (not detected)	0.85	100	50	NE
	Oct-01-2013	1.3	1.1	100	50	NE
	Jan-07-2014	1.2	1.2	100	50	NE
	Apr-03-2014	1.2	1.1	100	50	NE
	Jul-08-2014	ND <1.0 (not detected)	0.87	100	50	10
15-08	Aug-11-2011	1.4	1.6	100	50	NE
	Oct-05-2011	1.7	1.8	100	50	NE
	Jan-04-2012	1.4	1.4	100	50	NE
	Apr-05-2012	1.4	1.5	100	50	NE
	Jul-11-2012	1.3	1.5	100	50	NE
	Oct-02-2012	1.4	1.4	100	50	NE
	Jan-07-2013	1.1	1.3	100	50	NE
	Apr-02-2013	1.3	1.5	100	50	NE
	Jul-01-2013	1.2	1.0	100	50	NE
	Oct-01-2013	1.6	1.6	100	50	NE

Groundwater Sampling Results - July 2014

Wells #15-05 and 15-06 [REDACTED]

Well #15-08 [REDACTED]

Well #15-12 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
	Jan-07-2014 Apr-03-2014 Jul-08-2014	1.3 1.4 1.3	1.4 1.4 1.4	100 100 100	50 50 50	NE NE 10
15-12	Aug-18-2011 Oct-05-2011 Jan-05-2012 Apr-05-2012 Jul-11-2012 Oct-02-2012 Jan-07-2013 Apr-02-2013	ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected) ND <1.0 (not detected)	ND <0.2 (not detected) ND <0.2 (not detected) ND <0.06 (not detected) ND <0.06 (not detected) 0.081 ND <0.06 (not detected) ND <0.30 (not detected) ND <0.06 (not detected)	100 100 100 100 100 100 100 100	50 50 50 50 50 50 50 50	NE NE NE NE NE NE NE NE

Drinking water standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

NE Not Established

ND Not Detected

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria.

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.





October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #23-25 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 21, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #23-25. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #23-25** sampled on 07/21/2014:

- Total chromium was detected at a concentration of: 2.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.7 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

October 14, 2014

Page 2

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Nitrate as Nitrogen
- Total Dissolved Solids
- Uranium, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #23-25, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
[REDACTED]
October 14, 2014

Page 3

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #23-25 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
23-25	Aug-05-2009	1.04	0.300	100	50	NE
	Feb-19-2010	1.93	1.43	100	50	NE
	Aug-02-2010	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-02-2010	1.4	0.77	100	50	NE
	Dec-07-2010	ND <1.0 (not detected)	0.41	100	50	NE
	Feb-09-2011	1.7	1.3	100	50	NE
	Apr-06-2011	1.0	0.84	100	50	NE
	Aug-16-2011	1.0	0.70	100	50	NE
	Oct-06-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-07-2011	1.6	1.2	100	50	NE
	Jan-04-2012	1.6	1.4	100	50	NE
	May-16-2012	2.3	2.1	100	50	NE
	Jul-10-2012	2.5	2.2	100	50	NE
	Oct-01-2012	2.8	2.1	100	50	NE
	Jan-09-2013	2.1	1.3	100	50	NE
	Apr-03-2014	2.4	1.5	100	50	NE
Jul-21-2014	2.9	2.7	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #23-25

			CA Drinking Water Standards: (1)			500/1000/1500 ‡,§	20
			Federal Drinking Water Standards: (2)			500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
23-25	Jul-21-2014		62.5	ND (4)	14.0	1,400	48.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.

[REDACTED]
October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Nitrate as Nitrogen
- Uranium, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #36-41, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #36-41

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
36-41	Dec-13-2010	2.2	1.7	100	50	NE
	Nov-29-2011	1.3	0.60	100	50	NE
	Jan-11-2012	1.4	1.6	100	50	NE
	Apr-04-2012	1.1	1.1	100	50	NE
	Jul-13-2012	ND <1.0 (not detected)	0.94	100	50	NE
	Oct-08-2012	1.1	1.2	100	50	NE
	Jan-14-2013	ND <1.0 (not detected)	0.63	100	50	NE
	Apr-02-2013	1.1	1.4	100	50	NE
	Jul-02-2013	ND <1.0 (not detected)	0.64	100	50	NE
	Oct-03-2013	ND <1.0 (not detected)	0.88	100	50	NE
	Jan-15-2014	1.4	1.5	100	50	NE
	Apr-01-2014	1.3	1.4	100	50	NE
	Jul-09-2014	1.5	1.5	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #36-41

CA Drinking Water Standards: ⁽¹⁾			10	15	50	0.3 ‡	0.05 ‡	10	500/1000/1500 ‡,§	NE	20
Federal Drinking Water Standards: ⁽²⁾			10	15	50	0.3 ‡	0.05 ‡	10	500 ‡	NE	20
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
36-41	Apr-01-2014		9.5	33.8	9.6 J	ND (0.020)	ND (0.0005)	9.0	840	ND (1.0)	25.0
	Jul-09-2014		7.8	40.2	4.3	ND (0.02)	ND (0.0005)	13.0	1,000	ND (1)	29.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-36 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 15, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-36. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-36** sampled on 07/15/2014:

- Total chromium was detected at a concentration of: 2.7 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-36 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-36

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-36	Jul-13-2011	2.2	1.0	100	50	NE
	Nov-11-2011	3.0	0.81	100	50	NE
	Jan-20-2012	2.3	0.76	100	50	NE
	Apr-25-2012	2.5	0.65	100	50	NE
	Jul-10-2012	2.7	2.3	100	50	NE
	Oct-04-2012	2.9	1.7	100	50	NE
	Jan-09-2013	2.2	0.24	100	50	NE
	Apr-04-2013	3.2	2.1	100	50	NE
	Jul-01-2013	2.8	1.7	100	50	NE
	Oct-03-2013	2.8	2.1	100	50	NE
	Jan-14-2014	2.3	0.80	100	50	NE
	Apr-02-2014	2.4	0.99	100	50	NE
	Jul-15-2014	2.7	1.2	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-75 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 16, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-75. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-75** sampled on 07/16/2014:

- Total chromium was detected at a concentration of: 1.8 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.8 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-75, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-75 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-75	Apr-27-2011	1.9	1.8	100	50	NE
	Jul-06-2011	2.1	1.8	100	50	NE
	Oct-04-2011	2.2	1.8	100	50	NE
	Jan-09-2012	1.6	1.8	100	50	NE
	Apr-04-2012	1.7	1.8	100	50	NE
	Jul-09-2012	1.4	1.7	100	50	NE
	Oct-03-2012	1.6	1.7	100	50	NE
	Jan-09-2013	1.7	1.8	100	50	NE
	Apr-08-2013	1.7	1.7	100	50	NE
	Jul-03-2013	1.5	1.7	100	50	NE
	Oct-01-2013	1.8	1.8	100	50	NE
	Jan-13-2014	1.6	1.6	100	50	NE
	Apr-04-2014	1.7	1.7	100	50	NE
	Jul-16-2014	1.8	1.8	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-75

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-75	Apr-04-2014		13.3	ND (4)	3.3	700	9.6
	Jul-16-2014		5.6 J	ND (4)	3.7	700	7.3
	Jul-16-2014	(dup)	8.8	ND (4)	3.6	700	7.5

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014

Well(s) #23-07

Dear

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 11, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #23-07. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #23-07** sampled on 07/11/2014:

- Total chromium was detected at a concentration of: 2.4 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.0 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #23-07 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]

[REDACTED]

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #23-07

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
23-07	Mar-28-2003	2.40	1.00	100	50	NE
	Jul-08-2004		1.40	100	50	NE
	Nov-14-2006	1.68	1.06 J	100	50	NE
	Jan-07-2011	2.6	2.6	100	50	NE
	Mar-07-2011	1.5	1.3	100	50	NE
	Apr-26-2011	2.1	1.9	100	50	NE
	Jul-13-2011	1.9	1.8	100	50	NE
	Oct-05-2011	2.6	2.4	100	50	NE
	Oct-27-2011	2.6	2.4	100	50	NE
	Jan-12-2012	1.2	1.5	100	50	NE
	Apr-13-2012	1.7	2.0	100	50	NE
	Jul-13-2012	1.6	1.9	100	50	NE
	Oct-16-2012	1.9	1.0	100	50	NE
	Mar-12-2013	2.3	1.9	100	50	NE
	Jan-24-2014	1.8	1.6	100	50	NE
	Apr-04-2014	3.0	2.1	100	50	NE
Jul-11-2014	2.4	2.0	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #23-28 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #23-28. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #23-28** sampled on 07/10/2014:

- Total chromium was detected at a concentration of: 1.8 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.9 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #23-28, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #23-28 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
23-28	Jan-10-2011	2.4	1.8	100	50	NE
	Apr-06-2011	2.2	2.1	100	50	NE
	Aug-16-2011	3.2 J	2.0	100	50	NE
	Oct-31-2011	2.0	1.9	100	50	NE
	Jan-16-2012	ND <1.0 (not detected)	0.53	100	50	NE
	Apr-30-2012	1.8	2.1	100	50	NE
	Aug-09-2012	1.6	2.1	100	50	NE
	Jan-11-2013	1.0	1.3	100	50	NE
	Oct-03-2013	1.8	2.0	100	50	NE
	Jan-16-2014	1.4	1.4	100	50	NE
	Apr-04-2014	2.0	2.1	100	50	NE
	Jul-10-2014	1.8	1.9	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #23-28

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
23-28	Jul-10-2014		12.5 J	ND (4)	3.8	340 J	8.5
	Jul-10-2014	(dup)	11.4 J	ND (4)	3.9	460 J	8.7

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #34-77 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 8, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #34-77. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #34-77** sampled on 07/08/2014:

- Total chromium was detected at a concentration of: 1.1 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.1 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #34-77 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #34-77

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
34-77	Nov-22-2011	1.2	1.0	100	50	NE
	Jan-10-2012	ND <1.0 (not detected)	0.98	100	50	NE
	Apr-05-2012	ND <1.0 (not detected)	0.62	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	1.1	100	50	NE
	Oct-05-2012	1.1	1.0	100	50	NE
	Jan-09-2013	ND <1.0 (not detected)	0.74	100	50	NE
	Apr-04-2013	1.2	1.2	100	50	NE
	Jul-10-2013	ND <1.0 (not detected)	1.2	100	50	NE
	Oct-04-2013	1.1	1.1	100	50	NE
	Jan-07-2014	1.1	0.99	100	50	NE
	Apr-01-2014	1.1	1.2	100	50	NE
	Jul-08-2014	1.1	1.1	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Arsenic, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #34-38, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #34-03 and #34-38

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
34-03	May-24-2001	ND <2.5 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jul-05-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Aug-16-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Sep-27-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Oct-24-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-19-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Dec-13-2001	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jan-23-2002	1.40	ND <0.20 (not detected)	100	50	NE
	Feb-19-2002	2.30	ND <0.20 (not detected)	100	50	NE
	Mar-27-2002	1.60	ND <0.20 (not detected)	100	50	NE
	Apr-24-2002	2.40	ND <0.20 (not detected)	100	50	NE
	May-21-2002	1.80	ND <0.20 (not detected)	100	50	NE
	Jun-26-2002	ND <1.0 (not detected)	ND <0.20 J (not detected)	100	50	NE
	Jul-23-2002	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Aug-20-2002	1.60	ND <0.20 (not detected)	100	50	NE
	Oct-16-2002	1.50	ND <0.20 (not detected)	100	50	NE
	Nov-13-2002	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jun-06-2006	2.92	ND <0.20 (not detected)	100	50	NE
34-38	Jan-17-2006	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Aug-05-2009	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jan-12-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jul-06-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-29-2011	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-10-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	May-02-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-12-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-05-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-11-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-03-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-03-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-13-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-16-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
Jul-16-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	10	

Groundwater Sampling Results

Well(s) #34-38

CA Drinking Water Standards: (1)			10	15	50	0.3 ‡	0.05 ‡	10	500/1000/1500 ‡,§	NE	20
Federal Drinking Water Standards: (2)			10	15	50	0.3 ‡	0.05 ‡	10	500 ‡	NE	20
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
34-38	Jul-16-2014		12.0	ND (3)	ND (4)	ND (0.02)	0.013	0.16	270	ND (1)	ND (0.67)

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014



Subject: Results of Water Well Sampling - July 2014
Well(s) #BGS-25 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #BGS-25. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #BGS-25** sampled on 07/10/2014:

- Total chromium was detected at a concentration of: 1.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.0 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #BGS-25 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

Page 2

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #BGS-25 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
BGS-25	Jan-30-2006	ND <1.0 (not detected)	0.477	100	50	NE
	Apr-26-2006	1.20	0.767	100	50	NE
	Jul-26-2006	1.54	1.31 J	100	50	NE
	Oct-23-2006	1.21	0.988	100	50	NE
	Oct-06-2011	1.7	1.5	100	50	NE
	Oct-19-2011	1.9	1.6	100	50	NE
	Jan-11-2012	1.3	1.4	100	50	NE
	Apr-06-2012	1.5	1.5	100	50	NE
	Jul-19-2012	1.4	1.5	100	50	NE
	Oct-18-2012	1.4	1.5	100	50	NE
	Jan-09-2013	1.2	1.2	100	50	NE
	Apr-04-2013	1.3	1.1	100	50	NE
	Jul-11-2013	1.5	1.8	100	50	NE
	Oct-04-2013	1.7	1.7	100	50	NE
	Jan-09-2014	1.6	1.5	100	50	NE
	Apr-04-2014	1.8	1.9	100	50	NE
Jul-10-2014	1.9	2.0	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling – July 2014
Well #36-17 [REDACTED]
Well #36-43 [REDACTED]
Well #BGS-27 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #36-17, #36-43, and #BGS-27. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #36-17** sampled on 07/02/2014:

- Total chromium was detected at a concentration of: 1.1 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.1 ppb

For **Well #36-43** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.53 ppb

For **Well #BGS-27** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.92 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

[REDACTED]

Based on the results, the water from the domestic well(s) on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #36-17, #36-43, and #BGS-27 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well #36-17 and BGS-05 [REDACTED]

Well #36-43 [REDACTED]

Well #BGS-27 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
36-17	Feb-19-2002	1.9	0.95	100	50	NE
	Nov-21-2011	1.1	1.0	100	50	NE
	Jan-03-2012	ND <1.0 (not detected)	0.98	100	50	NE
	May-09-2012	ND <1.0 (not detected)	1.0	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	0.92	100	50	NE
	Oct-02-2012	1.0	1.0	100	50	NE
	Jan-07-2013	ND <1.0 (not detected)	0.86	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.89	100	50	NE
	Jul-01-2013	ND <1.0 (not detected)	1.1	100	50	NE
	Oct-02-2013	1.0	1.1	100	50	NE
	Jan-14-2014	ND <1.0 (not detected)	0.87	100	50	NE
	Apr-01-2014	ND <1.0 (not detected)	0.96	100	50	NE
	Jul-02-2014	1.1	1.1	100	50	10
36-43	Nov-16-2011	ND <1.0 (not detected)	0.63	100	50	NE
	Jan-03-2012	ND <1.0 (not detected)	0.53	100	50	NE
	May-09-2012	ND <1.0 (not detected)	0.62	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	0.56	100	50	NE
	Oct-02-2012	ND <1.0 (not detected)	0.60	100	50	NE
	Jan-07-2013	ND <1.0 (not detected)	0.39	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.52	100	50	NE
	Jul-01-2013	ND <1.0 (not detected)	0.52	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	0.58	100	50	NE
	Mar-07-2014	ND <1.0 (not detected)	0.55	100	50	NE
	Apr-01-2014	ND <1.0 (not detected)	0.55	100	50	NE
	Jul-02-2014	ND <1.0 (not detected)	0.53	100	50	10
BGS-05	Jan-31-2006	1.11	0.959	100	50	NE
	Apr-25-2006	ND <1.0 (not detected)	0.762	100	50	NE
BGS-27	Feb-02-2006	1.87	1.64	100	50	NE
	Apr-25-2006	1.66	1.4	100	50	NE
	Jul-26-2006	1.43	1.38 J	100	50	NE
	Oct-24-2006	1.38	1.28	100	50	NE
	Nov-16-2011	ND <1.0 (not detected)	1.0	100	50	NE
	Jan-03-2012	ND <1.0 (not detected)	0.74	100	50	NE

Groundwater Sampling Results - July 2014

Well #36-17 and BGS-05 [REDACTED]

Well #36-43 [REDACTED]

Well #BGS-27 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
	May-09-2012	ND <1.0 (not detected)	0.86	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	0.48	100	50	NE
	Oct-02-2012	ND <1.0 (not detected)	0.92	100	50	NE
	Jan-09-2013	1.0	1.1	100	50	NE
	Apr-02-2013	1.0	1.1	100	50	NE
	Jul-01-2013	1.1	1.1	100	50	NE
	Oct-02-2013	1.3	1.3	100	50	NE
	Jan-10-2014	ND <1.0 (not detected)	1.2	100	50	NE
	Apr-01-2014	1.0	0.94	100	50	NE
	Jul-02-2014	ND <1.0 (not detected)	0.92	100	50	10

Drinking water standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

NE Not Established

ND Not Detected

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria.

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



**Pacific Gas and
Electric Company**

José H. Moreno
Community Relations Manager
Hinkley Groundwater Remediation Project

22999 Community Blvd
Hinkley, California 92347

760-253-7896
HinkleyInfo@pge.com

October 17, 2014



Subject: Results of Water Well Sampling – July 2014
Well(s) #22-62 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well(s) for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 15, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-62. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-62** sampled on 07/15/2014:

- Total chromium was detected at a concentration of: 1.3 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from state agencies like the California Department of Public Health (CDPH) and Office of Environmental Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those to residents who

[REDACTED]

have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables.

Previously Reported Results

Based on a review of the data, it was determined that the May 21, 2014 letter mailed to you with the results of the sampling that occurred in April incorrectly reported the Uranium results. That error has been corrected and the correct Uranium results for the April 2014 sampling are shown on the table attached as the last page of this letter.

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-62, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for the well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Tables of current and historical results

Groundwater Sampling Results - July 2014

Well(s) #22-62 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-62	Jan-05-2011	2.1	1.4	100	50	NE
	Nov-28-2011	1.5	1.3	100	50	NE
	Jan-12-2012	1.0	1.2	100	50	NE
	Apr-04-2012	1.2	1.3	100	50	NE
	Jul-11-2012	1.0	1.3	100	50	NE
	Oct-08-2012	1.1	1.3	100	50	NE
	Jan-10-2013	1.2	1.3	100	50	NE
	Apr-04-2013	1.3	1.3	100	50	NE
	Jul-08-2013	1.3	1.3	100	50	NE
	Oct-04-2013	1.2	1.2	100	50	NE
	Mar-18-2014	1.2	1.2	100	50	NE
	Apr-07-2014	1.2	1.3	100	50	NE
	Jul-15-2014	1.3	1.2	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-62

CA Drinking Water Standards: ⁽¹⁾			15	50 Φ	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50 Φ	10	500 ‡	20 Ω
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-62	Apr-07-2014		9.0	4.3	1.4	740	5.4J
	Jul-15-2014		7.5J	ND (4)	2.4	730	6.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

Φ The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

Ω The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #27-42 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #27-42. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #27-42** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.24 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #27-42 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

Page 2

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #27-42

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
27-42	Feb-19-2008	1.50	0.355	100	50	NE
	Mar-03-2011	ND <1.0 (not detected)	0.38	100	50	NE
	Apr-04-2011	ND <1.0 (not detected)	0.28	100	50	NE
	Jul-07-2011	ND <1.0 (not detected)	0.59	100	50	NE
	Oct-06-2011	ND <1.0 (not detected)	0.60	100	50	NE
	Jan-04-2012	ND <1.0 (not detected)	0.55	100	50	NE
	Apr-04-2012	ND <1.0 (not detected)	0.46	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	0.53	100	50	NE
	Oct-03-2012	ND <1.0 (not detected)	0.55	100	50	NE
	Jan-17-2013	ND <1.0 (not detected)	0.43	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.22	100	50	NE
	Jul-03-2013	ND <1.0 (not detected)	0.072	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	0.24	100	50	NE
	Jan-06-2014	ND <1.0 (not detected)	0.40	100	50	NE
	Apr-09-2014	ND <1.0 (not detected)	0.47	100	50	NE
Jul-02-2014	ND <1.0 (not detected)	0.24	100	50	10	
27-43	Feb-19-2008	1.68	1.37	100	50	NE
	Mar-03-2011	1.1	1.4	100	50	NE
	Apr-04-2011	1.7	1.5	100	50	NE
	Jul-07-2011	1.2	1.4	100	50	NE
	Oct-06-2011	1.4	1.5	100	50	NE
	Jan-09-2012	1.1	1.3	100	50	NE
	Apr-04-2012	1.2	1.3	100	50	NE
	Jul-10-2012	1.2	1.3	100	50	NE
	Oct-03-2012	1.4	1.4	100	50	NE
	Apr-02-2013	1.2	1.4	100	50	NE
	Jul-03-2013	1.2	1.4	100	50	NE
	Oct-02-2013	1.5	1.4	100	50	NE
	Jan-06-2014	1.3	1.4	100	50	NE
	Apr-09-2014	2.3	1.5	100	50	NE

Groundwater Sampling Results - July 2014

Well(s) #27-42

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
<p>Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.</p>						
<p>Key to Groundwater Sampling Results</p>						
<p>Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.</p> <p>-- Not Sampled ND Not Detected NE Not Established J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.</p>						



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #27-43 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 15, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #27-43. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #27-43** sampled on 07/15/2014:

- Total chromium was detected at a concentration of: 1.4 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.4 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #27-43, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #27-42

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
27-42	Feb-19-2008	1.50	0.355	100	50	NE
	Mar-03-2011	ND <1.0 (not detected)	0.38	100	50	NE
	Apr-04-2011	ND <1.0 (not detected)	0.28	100	50	NE
	Jul-07-2011	ND <1.0 (not detected)	0.59	100	50	NE
	Oct-06-2011	ND <1.0 (not detected)	0.60	100	50	NE
	Jan-04-2012	ND <1.0 (not detected)	0.55	100	50	NE
	Apr-04-2012	ND <1.0 (not detected)	0.46	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	0.53	100	50	NE
	Oct-03-2012	ND <1.0 (not detected)	0.55	100	50	NE
	Jan-17-2013	ND <1.0 (not detected)	0.43	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.22	100	50	NE
	Jul-03-2013	ND <1.0 (not detected)	0.072	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	0.24	100	50	NE
	Jan-06-2014	ND <1.0 (not detected)	0.40	100	50	NE
	Apr-09-2014	ND <1.0 (not detected)	0.47	100	50	NE
Jul-02-2014	ND <1.0 (not detected)	0.24	100	50	10	
27-43	Feb-19-2008	1.68	1.37	100	50	NE
	Mar-03-2011	1.1	1.4	100	50	NE
	Apr-04-2011	1.7	1.5	100	50	NE
	Jul-07-2011	1.2	1.4	100	50	NE
	Oct-06-2011	1.4	1.5	100	50	NE
	Jan-09-2012	1.1	1.3	100	50	NE
	Apr-04-2012	1.2	1.3	100	50	NE
	Jul-10-2012	1.2	1.3	100	50	NE
	Oct-03-2012	1.4	1.4	100	50	NE
	Apr-02-2013	1.2	1.4	100	50	NE
	Jul-03-2013	1.2	1.4	100	50	NE
	Oct-02-2013	1.5	1.4	100	50	NE
	Jan-06-2014	1.3	1.4	100	50	NE
	Apr-09-2014	2.3	1.5	100	50	NE
	Jul-15-2014	1.4	1.4	100	50	10

Groundwater Sampling Results - July 2014

Well(s) #27-42

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #27-43

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
27-43	Jul-15-2014		18.9 J	4.7	6.6	540	11.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-40 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 1, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-40. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-40** sampled on 07/01/2014:

- Total chromium was detected at a concentration of: 1.2 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.1 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-40 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-40

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-40	Nov-03-2011	1.1	1.2	100	50	NE
	Jan-04-2012	1.1	1.1	100	50	NE
	Apr-05-2012	1.0	1.2	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	1.0	100	50	NE
	Oct-02-2012	1.2	1.3	100	50	NE
	Jan-07-2013	1.1	1.2	100	50	NE
	Apr-02-2013	1.1	1.3	100	50	NE
	Jul-01-2013	ND <1.0 (not detected)	1.1	100	50	NE
	Oct-04-2013	1.1	1.2	100	50	NE
	Jan-07-2014	1.2	1.2	100	50	NE
	Apr-02-2014	1.1	1.2	100	50	NE
	Jul-01-2014	1.2	1.1	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014



Subject: Results of Water Well Sampling - July 2014
Well(s) #28-25 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 1, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-25. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-25** sampled on 07/01/2014:

- Total chromium was detected at a concentration of: 1.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.8 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-25 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-25

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-25	Dec-21-2010	2.7	2.3	100	50	NE
	Jul-13-2011	2.2	2.2	100	50	NE
	Oct-06-2011	2.2	2.2	100	50	NE
	Jan-04-2012	1.6	1.7	100	50	NE
	Apr-05-2012	1.9	2.0	100	50	NE
	Jul-13-2012	2.0	2.1	100	50	NE
	Oct-02-2012	2.0	2.0	100	50	NE
	Jan-07-2013	1.8	2.0	100	50	NE
	Apr-08-2013	2.0	2.0	100	50	NE
	Jul-01-2013	1.8	2.0	100	50	NE
	Oct-04-2013	2.0	1.9	100	50	NE
	Jan-07-2014	1.9	2.0	100	50	NE
	Apr-03-2014	2.0	2.0	100	50	NE
	Jul-01-2014	1.9	1.8	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-81, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-81 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-81	Oct-06-2011	1.6	1.6	100	50	NE
	Jan-05-2012	1.1	0.97	100	50	NE
	Apr-11-2012	1.4	1.4	100	50	NE
	Jul-11-2012	1.5	1.7	100	50	NE
	Oct-03-2012	1.7	1.6	100	50	NE
	Jan-15-2013	1.1	1.1	100	50	NE
	Apr-01-2013	1.4	1.5	100	50	NE
	Jul-08-2013	1.6	1.8	100	50	NE
	Oct-01-2013	1.4	1.4	100	50	NE
	Jan-07-2014	ND <1.0 (not detected)	0.77	100	50	NE
	Apr-02-2014	1.3	1.4	100	50	NE
	Jul-14-2014	1.4	1.3	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-81

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-81	Apr-02-2014		13.2	ND (4)	3.3	460	7.9
	Jul-14-2014		7.3 J	ND (4)	3.9	430	7.6

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #23-24 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 7, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #23-24. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #23-24** sampled on 07/07/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.34 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

████████████████████
████████████████████
October 14, 2014

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There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from September 2014 for the domestic well(s) on your property, well ID(s) # 23-24, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #23-24 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
23-24	Jan-19-2010	1.55	1.50	100	50	NE
	Aug-02-2010	1.8	2.3	100	50	NE
	Oct-27-2010	2.1	2.7	100	50	NE
	Feb-09-2011	1.8	1.9	100	50	NE
	Apr-05-2011	2.2	2.4	100	50	NE
	Jul-13-2011	1.9	2.3	100	50	NE
	Oct-05-2011	ND <1.0 (not detected)	ND <1.0 (not detected)	100	50	NE
	Nov-07-2011	2.2	2.6	100	50	NE
	Jan-09-2012	1.6	2.0	100	50	NE
	Apr-20-2012	1.2	1.5	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	ND <0.30 (not detected)	100	50	NE
	Oct-01-2012	1.4	1.0	100	50	NE
	Jan-08-2013	1.5	ND <0.060 (not detected)	100	50	NE
	Jul-01-2013	ND <1.0 (not detected)	0.38	100	50	NE
	Oct-08-2013	1.0	0.43	100	50	NE
	Apr-07-2014	ND <1.0 (not detected)	0.35	100	50	NE
	Jul-07-2014	ND <1.0 (not detected)	0.34	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #23-24

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
23-24	Jul-07-2014		4.4 J	ND (4)	1.8	370	2.9

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #27-16 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 9, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #27-16. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #27-16** sampled on 07/09/2014:

- Total chromium was detected at a concentration of: 1.2 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #27-16 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #27-16

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
27-16	Sep-14-2006	1.15	1.22	100	50	NE
	Mar-03-2011	1.2	1.4	100	50	NE
	Apr-05-2011	1.8	1.5	100	50	NE
	Jul-07-2011	1.4	1.5	100	50	NE
	Oct-07-2011	1.5	1.2	100	50	NE
	Jan-10-2012	1.2	1.4	100	50	NE
	Apr-12-2012	1.2	1.4	100	50	NE
	Jul-10-2012	1.2	1.3	100	50	NE
	Oct-08-2012	1.2	1.3	100	50	NE
	Jan-10-2013	1.3	1.4	100	50	NE
	Apr-02-2013	1.2	1.4	100	50	NE
	Jul-03-2013	1.1	1.2	100	50	NE
	Oct-03-2013	1.1	1.2	100	50	NE
	Jan-09-2014	1.3	1.3	100	50	NE
	Apr-02-2014	1.2	1.4	100	50	NE
Jul-09-2014	1.2	1.2	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014



Subject: Results of Water Well Sampling - July 2014
Well(s) #22-48 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 14, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-48. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #22-48** sampled on 07/14/2014:

- Total chromium was detected at a concentration of: 1.5 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.5 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #22-48 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-48 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-48	Jan-10-2011	1.7	1.6	100	50	NE
	Oct-04-2011	2.1	1.6	100	50	NE
	Jan-16-2012	1.4	1.5	100	50	NE
	Apr-09-2012	1.4	1.6	100	50	NE
	Jul-09-2012	1.4	1.6	100	50	NE
	Oct-03-2012	1.5	1.5	100	50	NE
	Jan-14-2013	1.5	1.6	100	50	NE
	Apr-02-2013	1.4	1.6	100	50	NE
	Jul-03-2013	1.4	1.6	100	50	NE
	Oct-01-2013	1.8	1.6	100	50	NE
	Jan-08-2014	1.6	1.5	100	50	NE
	Apr-08-2014	1.6	1.6	100	50	NE
	Jul-14-2014	1.5	1.5	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #36-26 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #36-26. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #36-26** sampled on 07/02/2014:

- Total chromium was detected at a concentration of: 1.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.9 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #36-26 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #36-26 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
36-26	Jun-09-2010	1.8	2.1	100	50	NE
	Jan-05-2011	2.0	1.6	100	50	NE
	Oct-19-2011	2.7	2.1	100	50	NE
	Jan-10-2012	2.1	2.0	100	50	NE
	Apr-04-2012	1.7	1.6	100	50	NE
	Jul-16-2012	1.7	1.2	100	50	NE
	Oct-04-2012	1.8	1.7	100	50	NE
	Jan-16-2013	1.8	1.6	100	50	NE
	Apr-10-2013	2.2	2.1	100	50	NE
	Jul-02-2013	2.2	2.1	100	50	NE
	Oct-01-2013	2.0	1.2	100	50	NE
	Jan-15-2014	2.0	1.7	100	50	NE
	Apr-03-2014	1.8	1.5	100	50	NE
	Jul-02-2014	1.9	1.9	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #27-48 and #27-49

Dear

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #27-48 and #27-49. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #27-48** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.52 parts per billion (ppb)

For **Well #27-49** sampled on 07/02/2014:

- Total chromium was detected at a concentration of: 1.7 ppb
- Hexavalent chromium was detected at a concentration of: 1.6 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #27-48 and #27-49 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #27-48 and #27-49 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
27-48	Mar-09-2011	1.5	1.2	100	50	NE
	Apr-04-2011	1.4	1.3	100	50	NE
	Jul-08-2011	ND <1.0 (not detected)	1.1	100	50	NE
	Oct-06-2011	1.3	1.0	100	50	NE
	Jan-17-2012	ND <1.0 (not detected)	0.75	100	50	NE
	May-09-2012	ND <1.0 (not detected)	0.68	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	0.61	100	50	NE
	Oct-04-2012	ND <1.0 (not detected)	0.56	100	50	NE
	Jan-09-2013	ND <1.0 (not detected)	0.58	100	50	NE
	Apr-03-2013	ND <1.0 (not detected)	0.67	100	50	NE
	Jul-02-2013	ND <1.0 (not detected)	0.68	100	50	NE
	Oct-03-2013	ND <1.0 (not detected)	0.66	100	50	NE
	Jan-09-2014	ND <1.0 (not detected)	0.28	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	0.61	100	50	NE
	Jul-02-2014	ND <1.0 (not detected)	0.52	100	50	10
27-49	Mar-09-2011	2.0	2.0	100	50	NE
	Apr-04-2011	2.1	1.9	100	50	NE
	Jul-08-2011	1.5	1.8	100	50	NE
	Oct-06-2011	2.5	1.8	100	50	NE
	Jan-17-2012	1.4	1.5	100	50	NE
	May-09-2012	1.5	1.5	100	50	NE
	Jul-10-2012	1.2	1.2	100	50	NE
	Oct-04-2012	1.3	1.2	100	50	NE
	Jan-09-2013	ND <1.0 (not detected)	0.25	100	50	NE
	Apr-03-2013	1.8	1.8	100	50	NE
	Jul-02-2013	1.7	1.7	100	50	NE
	Oct-03-2013	1.6	1.8	100	50	NE
	Jan-09-2014	1.8	1.9	100	50	NE
	Apr-02-2014	1.8	2.0	100	50	NE
	Jul-02-2014	1.7	1.6	100	50	10

Groundwater Sampling Results - July 2014


Well(s) #27-48 and #27-49 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
<p>Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.</p>						
Key to Groundwater Sampling Results						
<p>Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.</p> <p>-- Not Sampled ND Not Detected NE Not Established J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.</p>						



September 16, 2014



Subject: Results of Water Well Sampling - July 2014
Well(s) #28-51 

Dear 

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-51. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-51** sampled on 07/10/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.098 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-51 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-51

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-51	Dec-02-2011	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-09-2012	ND <1.0 (not detected)	0.099	100	50	NE
	Mar-13-2013	ND <1.0 (not detected)	0.13	100	50	NE
	May-08-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-03-2013	ND <1.0 (not detected)	0.064	100	50	NE
	Oct-03-2013	ND <1.0 (not detected)	0.28	100	50	NE
	Jan-13-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-04-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-10-2014	ND <1.0 (not detected)	0.098	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #34-50, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results

Well(s) #34-50 XXXXXXXXXX

CA Drinking Water Standards: ⁽¹⁾			10	15	50	0.3 ‡	0.05 ‡	10	500/1000/1500 ‡,§	NE	20
Federal Drinking Water Standards: ⁽²⁾			10	15	50	0.3 ‡	0.05 ‡	10	500 ‡	NE	20
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
34-50	Jul-16-2014		1.3	5.1	ND (4)	ND (0.02)	ND (0.0005)	0.40	310	ND (1)	4.8
	Jul-16-2014	(dup)	1.3	7.6	ND (4)	ND (0.02)	ND (0.0005)	0.39	330	ND (1)	5.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



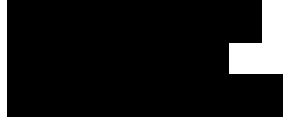
**Pacific Gas and
Electric Company**

José H. Moreno
Community Relations Manager
Hinkley Groundwater Remediation Project

22999 Community Blvd
Hinkley, California 92347

760-253-7896
HinkleyInfo@pge.com

October 17, 2014



Subject: Results of Water Well Sampling – July 2014
Well(s) #22-108 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well(s) for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 7, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-108. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-108** sampled on 07/07/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.15 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from state agencies like the California Department of Public Health (CDPH) and Office of Environmental Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

[REDACTED]

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached tables, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Total Dissolved Solids
- Uranium, Dissolved

Previously Reported Results

A May 21, 2014 letter mailed to you included the results for Gross Alpha analyzed using United States Environmental Protection Agency (USEPA) Method 7110C for samples collected on April 2, 2014. During the Second Quarter 2014 monitoring event, laboratory analysis of Gross Alpha was performed using two USEPA-certified methods: USEPA Method 900.0 and USEPA Method 7110C. Upon subsequent review of the results, it was determined that the Gross Alpha results reported using USEPA Method 900.0 were more accurate and representative of site conditions. Both sets of results are presented in the table attached (as the last page of this letter). Only the USEPA Method 900.0 gross alpha results will be used for future evaluations.

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-108, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for the well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Tables of current and historical results

Groundwater Sampling Results - July 2014

Well(s) #22-108

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-108	Jan-16-2013	ND <1.0 (not detected)	0.092	100	50	NE
	Jul-02-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-01-2013	ND <1.0 (not detected)	0.28	100	50	NE
	Jan-08-2014	ND <1.0 (not detected)	0.23	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-07-2014	ND <1.0 (not detected)	0.15	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-108

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-108	Apr-02-2014		38.0 (21.1J S)	5.6J	8.4	2,000	26.0
	Jul-07-2014		26.3J	4.2	9.7	2,300	29.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

S Screening level results (in parenthesis)

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #25-14 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 1, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #25-14. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #25-14** sampled on 07/01/2014:

- Total chromium was detected at a concentration of: 1.0 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 0.39 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #25-14, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #25-14 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
25-14	Apr-01-2010	ND <1.0 (not detected)	1.17	100	50	NE
	Aug-02-2010	ND <1.0 (not detected)	0.22	100	50	NE
	Oct-27-2010	1.5	1.7	100	50	NE
	Feb-10-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Apr-05-2011	ND <1.0 (not detected)	0.25	100	50	NE
	Jul-07-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Oct-06-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-08-2011	ND <1.0 (not detected)	1.1	100	50	NE
	Jan-03-2012	1.3	1.3	100	50	NE
	May-09-2012	ND <1.0 (not detected)	0.37	100	50	NE
	Sep-05-2012	1.5	1.6	100	50	NE
	Oct-01-2012	ND <1.0 (not detected)	1.0	100	50	NE
	Jan-08-2013	ND <1.0 (not detected)	0.092	100	50	NE
	Apr-04-2013	ND <1.0 (not detected)	0.83	100	50	NE
	Jul-09-2013	ND <1.0 (not detected)	0.25	100	50	NE
	Oct-02-2013	1.4	1.4	100	50	NE
	Jan-07-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-04-2014	ND <1.0 (not detected)	0.13	100	50	NE
Jul-01-2014	1.0	0.39	100	50	10	

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #25-14

			CA Drinking Water Standards: ⁽¹⁾			Federal Drinking Water Standards: ⁽²⁾		
			15	50	10	500/1000/1500 ‡,§	20	20
			15	50	10	500 ‡	20	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)	
25-14	Jul-01-2014		11.0	ND (4)	3.4	570	8.5	

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #34-63 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 8, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #34-63. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #34-63** sampled on 07/08/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.36 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #34-63 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]

[REDACTED]

[REDACTED]

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #34-63 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
34-63	Dec-07-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-08-2013	ND <1.0 (not detected)	0.14	100	50	NE
	Apr-03-2013	ND <1.0 (not detected)	0.30	100	50	NE
	Jul-02-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-02-2013	1.4	1.3	100	50	NE
	Jan-15-2014	ND <1.0 (not detected)	0.84	100	50	NE
	Apr-10-2014	ND <1.0 (not detected)	0.25	100	50	NE
	Jul-08-2014	ND <1.0 (not detected)	0.36	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-78 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-78. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-78** sampled on 07/10/2014:

- Total chromium was detected at a concentration of: 1.4 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.5 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-78 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

Page 2

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-78 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-78	Mar-11-2013	1.4	1.5	100	50	NE
	Jul-15-2013	1.4	1.5	100	50	NE
	Oct-15-2013	1.2	1.5	100	50	NE
	Jan-16-2014	1.3	1.5	100	50	NE
	Apr-11-2014	1.5	1.6	100	50	NE
	Jul-10-2014	1.4	1.5	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-69 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-69. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-69** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.16 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-69, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-69 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-69	Apr-27-2011	ND <1.0 (not detected)	0.47	100	50	NE
	Jul-07-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Jun-06-2012	ND <1.0 (not detected)	0.27	100	50	NE
	Jul-12-2012	ND <1.0 (not detected)	0.51	100	50	NE
	Oct-03-2012	ND <1.0 (not detected)	0.57	100	50	NE
	Apr-01-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-08-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-02-2014	ND <1.0 (not detected)	0.16	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-69

			CA Drinking Water Standards: ⁽¹⁾			Federal Drinking Water Standards: ⁽²⁾		
			15	50	10	500/1000/1500 ‡,§	20	20
			15	50	10	500 ‡	20	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)	
22-69	Jul-02-2014		8.3	ND (4)	3.0	700	8.1	

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-17 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-17. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-17** sampled on 07/02/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.44 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-17 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff H. Bails".

cc: Jessica Bails

Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-17

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-17	Mar-09-2011	ND <1.0 (not detected)	0.68	100	50	NE
	Apr-04-2011	ND <1.0 (not detected)	0.69	100	50	NE
	Aug-17-2011	ND <1.0 (not detected)	0.62	100	50	NE
	Oct-05-2011	ND <1.0 (not detected)	0.57	100	50	NE
	Jan-25-2012	ND <1.0 (not detected)	0.54	100	50	NE
	May-09-2012	ND <1.0 (not detected)	0.59	100	50	NE
	Jul-10-2012	ND <1.0 (not detected)	0.56	100	50	NE
	Oct-01-2012	ND <1.0 (not detected)	0.57	100	50	NE
	Jan-15-2013	1.1	0.57	100	50	NE
	Apr-03-2013	ND <1.0 (not detected)	0.47	100	50	NE
	Jul-08-2013	ND <1.0 (not detected)	0.60	100	50	NE
	Oct-03-2013	ND <1.0 (not detected)	0.45	100	50	NE
	Jan-09-2014	ND <1.0 (not detected)	0.66	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	0.62	100	50	NE
	Jul-02-2014	ND <1.0 (not detected)	0.44	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-82 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 14, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-82. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-82** sampled on 07/14/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.51 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

[REDACTED]
October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Nitrate as Nitrogen

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-82, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
[REDACTED]
[REDACTED]

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-82 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-82	Nov-10-2011	ND <1.0 (not detected)	0.24	100	50	NE
	Jan-23-2012	ND <1.0 (not detected)	0.10	100	50	NE
	Apr-11-2012	ND <1.0 (not detected)	0.18	100	50	NE
	Jul-19-2012	ND <1.0 (not detected)	0.52	100	50	NE
	Oct-18-2012	ND <1.0 (not detected)	0.10	100	50	NE
	Jan-15-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-01-2013	ND <1.0 (not detected)	0.35	100	50	NE
	Jul-03-2013	ND <1.0 (not detected)	0.56	100	50	NE
	Oct-01-2013	ND <1.0 (not detected)	0.64	100	50	NE
	Jan-07-2014	ND <1.0 (not detected)	0.091	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	0.12	100	50	NE
	Jul-14-2014	ND <1.0 (not detected)	0.51	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-82

CA Drinking Water Standards: (1)			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: (2)			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-82	Apr-02-2014		15.2	6.2 J	12.0	690	9.5
	Jul-14-2014		16.3 J	ND (4)	11.0	650	8.6

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

██████████
██████████
██████████

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-30 ██████████

Dear ██████████

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 16, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-30. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-30** sampled on 07/16/2014:

- Total chromium was detected at a concentration of: 2.1 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.2 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property is within the primary and secondary standards for drinking water established by the CDPH and the EPA for the constituents shown in the attached tables

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-30, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-30 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-30	Jun-26-2003	2.10	1.90	100	50	NE
	Jan-12-2011	2.2	2.4	100	50	NE
	Apr-04-2011	2.5	2.4	100	50	NE
	Jul-06-2011	2.5	2.6	100	50	NE
	Oct-04-2011	2.9	2.4	100	50	NE
	Jan-17-2012	2.1	2.3	100	50	NE
	Apr-04-2012	2.2	2.3	100	50	NE
	Oct-03-2012	2.2	2.3	100	50	NE
	Jan-10-2013	2.5	2.3	100	50	NE
	Apr-04-2013	2.5	2.4	100	50	NE
	Jul-08-2013	2.1	2.4	100	50	NE
	Oct-02-2013	2.5	2.3	100	50	NE
	Jan-13-2014	2.5	2.7	100	50	NE
	Apr-04-2014	2.3	2.3	100	50	NE
	Jul-16-2014	2.1	2.2	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-30

			CA Drinking Water Standards: ⁽¹⁾	50	10	500/1000/1500 ‡,§	20
			Federal Drinking Water Standards: ⁽²⁾	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-30	Jul-16-2014		7.3	4.0	3.4	470	7.5

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #27-26 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #27-26. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #27-26** sampled on 07/02/2014:

- Total chromium was detected at a concentration of: 1.6 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.6 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #27-26, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #27-26 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
27-26	Jan-16-2006	2.36	2.06	100	50	NE
	Nov-03-2009	1.75	1.79	100	50	NE
	Mar-04-2011	1.5	2.0	100	50	NE
	Apr-05-2011	2.3	1.9	100	50	NE
	Jul-07-2011	1.7	1.9	100	50	NE
	Oct-06-2011	2.1	1.9	100	50	NE
	Jan-09-2012	1.4	1.7	100	50	NE
	May-09-2012	1.7	1.8	100	50	NE
	Jul-11-2012	1.5	1.6	100	50	NE
	Oct-04-2012	1.7	1.7	100	50	NE
	Jan-09-2013	1.5	1.7	100	50	NE
	Apr-04-2013	1.8	1.8	100	50	NE
	Jul-09-2013	1.5	1.7	100	50	NE
	Oct-08-2013	1.8	1.7	100	50	NE
	Jan-09-2014	1.6	1.7	100	50	NE
	Apr-02-2014	1.6	1.7	100	50	NE
	Jul-02-2014	1.6	1.6	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #27-26

			CA Drinking Water Standards: ⁽¹⁾	50	10	500/1000/1500 ‡,§	20
			Federal Drinking Water Standards: ⁽²⁾	15	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
27-26	Jul-02-2014		26.7	4.1	6.6	480	5.9
	Jul-02-2014	(dup)	26.8	4.5	6.7	500	5.9

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #36-31 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 10, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #36-31. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #36-31** sampled on 07/10/2014:

- Total chromium was detected at a concentration of: 1.4 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.3 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha
- Nitrate as Nitrogen

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #36-31, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #36-31 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
36-31	Jul-09-2012	1.6	1.9	100	50	NE
	Oct-18-2012	1.8	1.9	100	50	NE
	Jan-17-2013	1.9	1.7	100	50	NE
	Apr-02-2013	1.3	1.5	100	50	NE
	Jul-02-2013	1.5	1.5	100	50	NE
	Oct-02-2013	1.6	1.5	100	50	NE
	Apr-01-2014	1.4	1.4	100	50	NE
	Jul-10-2014	1.4	1.3	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #36-31

			CA Drinking Water Standards: (1)								
			Federal Drinking Water Standards: (2)								
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
36-31	Jul-10-2014		2.0	19.4 J	5.3	ND (0.02)	ND (0.0005)	15.0	840	ND (1)	19.0

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #34-58 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 9, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #34-58. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #34-58** sampled on 07/09/2014:

- Total chromium was not detected
- Hexavalent chromium was detected at a concentration of: 0.22 parts per billion (ppb)

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

██████████
October 14, 2014

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to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Manganese, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #34-58, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

██████████
██████████
██████████

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #34-58

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
34-58	Jan-03-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-29-2011	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-17-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	May-02-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-11-2012	ND <1.0 (not detected)	0.10	100	50	NE
	Dec-11-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Mar-13-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-10-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-11-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-09-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-09-2014	ND <1.0 (not detected)	0.22	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #34-58

CA Drinking Water Standards: (1)			10	15	50	0.3 ‡	0.05 ‡	10	500/1000/1500 ‡,§	NE	20
Federal Drinking Water Standards: (2)			10	15	50	0.3 ‡	0.05 ‡	10	500 ‡	NE	20
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
34-58	Jul-09-2014		9.8	ND (3)	ND (4)	ND (0.02)	0.052	0.16	300	ND (1)	0.72

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



September 16, 2014

[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-16 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 2, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-16. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-16** sampled on 07/02/2014:

- Total chromium was detected at a concentration of: 1.2 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 0.80 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-16 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-16 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-16	Nov-30-2011	1.0	0.62	100	50	NE
	Jan-06-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-02-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-02-2012	ND <1.0 (not detected)	0.37	100	50	NE
	Jan-09-2013	ND <1.0 (not detected)	0.30	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.23	100	50	NE
	Jul-10-2013	ND <1.0 (not detected)	0.57	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	0.45	100	50	NE
	Jan-09-2014	ND <1.0 (not detected)	0.23	100	50	NE
	Apr-03-2014	ND <1.0 (not detected)	0.13	100	50	NE
	Jul-02-2014	1.2	0.80	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-23 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 9, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-23. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #22-23** sampled on 07/09/2014:

- Total chromium was detected at a concentration of: 1.5 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.4 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #22-23 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

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Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-105 and #22-23

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-105	Jul-17-2012	1.2	1.4	100	50	NE
	Oct-03-2012	1.3	1.1	100	50	NE
22-23	Jul-17-2012	1.2	1.3	100	50	NE
	Oct-03-2012	1.4	1.3	100	50	NE
	Jan-16-2013	1.4	1.4	100	50	NE
	Apr-01-2013	1.2	1.4	100	50	NE
	Jul-02-2013	1.4	1.5	100	50	NE
	Oct-10-2013	ND <1.0 (not detected)	0.84	100	50	NE
	Jul-09-2014	1.5	1.4	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- <** The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014

Subject: Results of Water Well Sampling - July 2014
Well(s) #28-09 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 14, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #28-09. The samples were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #28-09** sampled on 07/14/2014:

- Total chromium was detected at a concentration of: 2.0 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.1 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from your well(s) is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

Next Steps

The sampling results from July 2014 for your well ID(s) #28-09 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

[REDACTED]
September 16, 2014

Page 2

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

[REDACTED]
Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #28-09 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
28-09	Nov-11-2011	2.2	1.9	100	50	NE
	Jan-10-2012	1.7	1.7	100	50	NE
	Apr-11-2012	1.5	1.5	100	50	NE
	Jul-12-2012	2.0	2.1	100	50	NE
	Dec-26-2012	1.8	1.9	100	50	NE
	Mar-12-2013	2.5	2.0	100	50	NE
	Apr-09-2013	3.0	3.1	100	50	NE
	Jul-09-2013	2.0	2.3	100	50	NE
	Oct-03-2013	1.4	1.3	100	50	NE
	Jan-14-2014	2.2	2.2	100	50	NE
	Apr-02-2014	2.0	2.2	100	50	NE
	Jul-14-2014	2.0	2.1	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

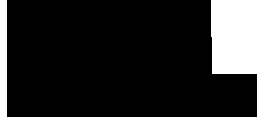
NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



September 16, 2014



Subject: Results of Water Well Sampling – July 2014
Well #BGS-48 [REDACTED]
Well #30E-01 [REDACTED]

Dear [REDACTED]

Thank you for participating in Pacific Gas and Electric Company's (PG&E) domestic well sampling program. The purpose of this letter is to provide you with the results of the July 2014 sampling effort. In addition, the attached table summarizes historical and current results.

Background

On July 8, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #BGS-48 and #30E-01. The samples were sent to Advanced Technology Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent sampling:

For **Well #BGS-48** (37825 Dixie) sampled on 07/08/2014:

- Total chromium was not detected
- Hexavalent chromium was not detected

For **Well #30E-01** (37885 Dixie) sampled on 07/08/2014:

- Total chromium was detected at a concentration of: 1.8 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 1.8 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.


Next Steps

The sampling results from July 2014 for your well ID(s) #BGS-48 and #30E-01 will be included in our *Third Quarter 2014 Groundwater Monitoring Report*, to be submitted to the Water Board at the end of October 2014.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails


Attachment: Table of historical and current results

Groundwater Sampling Results - July 2014

Well #BGS-48

Well #30E-01

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
BGS-48	Sep-28-2006	ND <1.0 (not detected)	0.577J	100	50	NE
	Oct-19-2006	ND <1.0 (not detected)	0.861	100	50	NE
	Aug-06-2009	ND <1.0 (not detected)	ND <0.2 (not detected)	100	50	NE
	Dec-08-2010	ND <1.0 (not detected)	0.25	100	50	NE
	Mar-10-2011	ND <1.0 (not detected)	0.28	100	50	NE
	Sep-06-2011	ND <1.0 (not detected)	0.49	100	50	NE
	Nov-18-2011	ND <1.0 (not detected)	0.54	100	50	NE
	Jan-03-2012	ND <1.0 (not detected)	0.52	100	50	NE
	Apr-03-2012	ND <1.0 (not detected)	0.21	100	50	NE
	Jul-12-2012	ND <1.0 (not detected)	0.13	100	50	NE
	Oct-02-2012	ND <1.0 (not detected)	0.50	100	50	NE
	Jan-09-2013	ND <1.0 (not detected)	0.37	100	50	NE
	Apr-02-2013	ND <1.0 (not detected)	0.087	100	50	NE
	Jul-08-2013	ND <1.0 (not detected)	0.13	100	50	NE
	Oct-02-2013	ND <1.0 (not detected)	0.082	100	50	NE
	Jan-10-2014	ND <1.0 (not detected)	0.071	100	50	NE
	Apr-02-2014	ND <1.0 (not detected)	0.062	100	50	NE
Jul-08-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	10	
30E-01	Oct-19-2006	1.16	1.22	100	50	NE
	Aug-27-2009	1.49	1.48	100	50	NE
	Dec-07-2010	2.00	1.7	100	50	NE
	Mar-10-2011	1.8	1.9	100	50	NE
	Sep-06-2011	2.1	1.8	100	50	NE
	Nov-18-2011	1.9	1.9	100	50	NE
	Jan-03-2012	2.0	2.0	100	50	NE
	Apr-03-2012	1.6	1.7	100	50	NE
	Jul-12-2012	1.7	1.6	100	50	NE
	Oct-02-2012	1.6	1.7	100	50	NE
	Jan-09-2013	1.5	2.0	100	50	NE
	Apr-02-2013	1.3	1.6	100	50	NE
	Jul-08-2013	1.6	1.8	100	50	NE
	Oct-02-2013	1.3	1.3	100	50	NE
	Jan-10-2014	1.7	1.7	100	50	NE
Apr-02-2014	1.3	1.5	100	50	NE	
Jul-08-2014	1.8	1.8	100	50	10	

Drinking water standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Groundwater Sampling Results - July 2014

Well #BGS-48 [REDACTED]

Well #30E-01 [REDACTED]

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

NE Not Established

ND Not Detected

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria.

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #34-06 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 17, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #34-06. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #34-06** sampled on 07/17/2014:

- Total chromium was not detected
- Hexavalent chromium was not detected

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Arsenic, Dissolved
- Manganese, Dissolved

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #34-06, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #34-06

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
34-06	Jan-17-2006	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Dec-06-2007	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Dec-21-2010	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Mar-10-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Aug-17-2011	ND <1.0 (not detected)	ND <0.20 (not detected)	100	50	NE
	Nov-29-2011	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-18-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	May-09-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-16-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-03-2012	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-16-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-01-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-12-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Oct-04-2013	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jan-09-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Apr-04-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	NE
	Jul-17-2014	ND <1.0 (not detected)	ND <0.060 (not detected)	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

-- Not Sampled

ND Not Detected

NE Not Established

J A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria

< The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #34-06

			CA Drinking Water Standards: (1)								
			Federal Drinking Water Standards: (2)								
Well ID	Sample Date	Sample Type	Arsenic, Dissolved (µg/L)	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Iron, Dissolved (mg/L)	Manganese, Dissolved (mg/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Uranium, Dissolved (pCi/L)
34-06	Jul-17-2014		11.0	ND (3)	ND (4)	0.14	0.14	ND (0.05)	300	ND (1)	ND (0.67)

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

ND Not detected at the reporting limit shown

NE Not established

mg/L milligrams per liter

pCi/L picocuries per liter

µg/L micrograms per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.



October 14, 2014

[REDACTED]
[REDACTED]
[REDACTED]

Subject: Results of Water Well Sampling - July 2014
Well(s) #22-103 [REDACTED]

Dear [REDACTED]

Thank you for allowing Pacific Gas and Electric Company (PG&E) to sample your domestic well for chromium and other constituents as outlined in the Final Environmental Impact Report (EIR) for the cleanup of the chromium plume in Hinkley. The results of the July 2014 sampling effort are provided below along with tables summarizing past sampling results from your well.

Background

On July 7, 2014, samples were collected from the domestic well(s) on your property, well ID(s) #22-103. The samples were analyzed for chromium and other water quality parameters. The samples analyzed for chromium were sent to ASSET Laboratories, Inc., a California-certified laboratory, and analyzed for total chromium using U.S. Environmental Protection Agency (EPA) Method 6020A. The laboratory also analyzed the samples for hexavalent chromium using EPA Method 218.6.

The following are the results of the recent chromium sampling:

For **Well #22-103** sampled on 07/07/2014:

- Total chromium was detected at a concentration of: 1.9 parts per billion (ppb)
- Hexavalent chromium was detected at a concentration of: 2.0 ppb

State and Federal Drinking Water Standards

The federal drinking water standard for total chromium is 100 parts per billion (ppb), and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb.

Based on the results, the water from the domestic well(s) on your property on your property is within the total chromium standard of 50 ppb and the hexavalent chromium standard of 10 ppb established by the California Department of Public Health for drinking water.

There are a number of possible constituents in Hinkley groundwater which are both naturally occurring, as well as occurring as a result of historical agricultural operations or past industrial practices. Some of these constituents may occur in levels above the drinking water standard in area wells.

PG&E has requested information from the state agencies like the California Department of Public Health (CDPH) and Office of Environment Health Hazard Assessment (OEHHA) about other constituents that might typically be found in the Hinkley area. We would be happy to provide those

October 14, 2014

Page 2

to residents who have questions. While we inform you about the results of this sampling, it should be clear that PG&E is not responsible for constituents in well water that are not a result of PG&E operations.

Based on the results, the water from the domestic well(s) on your property was not within the primary and/or secondary standards for drinking water established by the CDPH and the EPA **for the parameters listed below**. As shown on the attached table, the results of the well testing are greater than one or more standards established for:

- Gross Alpha

Next Steps

The sampling results from July 2014 for the domestic well(s) on your property, well ID(s) #22-103, will be included in our Third Quarter 2014 Groundwater Monitoring Report, to be submitted to the Water Board at the end of October 2014, and in our Third Quarter 2014 Agricultural Treatment Unit Monitoring Report, to be submitted to the Water Board after the end of Third Quarter 2014. We will contact you in the future to arrange the next well sampling.

Please Contact Us With Your Questions

Our local, bilingual (English/Spanish) staff is available to answer any questions about the sampling results for your well(s). Please contact Jessica Bails at (760) 253-7896 or visit our Hinkley Community Resource Office located at 22999 Community Boulevard. We are open Monday through Friday from 9 a.m. to 5 p.m. If you are unable to visit us during these hours we'd be happy to schedule a time that is convenient for you. You may also contact us by e-mail at HinkleyInfo@pge.com.

Thank you very much for your participation in our program.

Sincerely,



cc: Jessica Bails

Attachments: Table of historical and current results

Groundwater Sampling Results - July 2014

Well(s) #22-103 XXXXXXXXXX

Well Number	Sample Date	Concentrations in parts per billion (ppb)		Drinking Water Standards for Total Chromium (ppb)		Drinking Water Standard for Hexavalent Chromium (ppb)
		Total Chromium Method 6020A	Hexavalent Chromium Method EPA 218.6	Federal	State of CA	State of CA
22-103	Jul-09-2012	2.0	2.2	100	50	NE
	Oct-04-2012	2.2	2.1	100	50	NE
	Jan-25-2013	2.2	2.1	100	50	NE
	Apr-04-2013	2.4	2.2	100	50	NE
	Jul-02-2013	2.0	2.2	100	50	NE
	Oct-01-2013	2.3	2.2	100	50	NE
	Jan-07-2014	2.0	2.2	100	50	NE
	Apr-02-2014	2.0	2.1	100	50	NE
	Jul-07-2014	1.9	2.0	100	50	10

Drinking Water Standard: The federal drinking water standard for total chromium is 100 parts per billion (ppb) and the California drinking water standard for total chromium is 50 ppb. The California drinking water standard for hexavalent chromium is 10 ppb, which became effective July 1, 2014.

Key to Groundwater Sampling Results

Total Chromium results are for Total Chromium in a dissolved form. Samples are filtered before being analyzed.

- Not Sampled
- ND** Not Detected
- NE** Not Established
- J** A "J" shown next to a concentration indicates that the concentration is estimated based on data validation and quality control criteria
- < The less than (<) symbol, if shown, in front of a result indicates that the compound was not detected (ND) in the groundwater sample. Analytical equipment is limited by its capability to detect a compound below a specific level, and this limit is expressed on the table with a less than (<) symbol in front of the number representing the concentration below which the instrument cannot measure.

Groundwater Sampling Results

Well(s) #22-103

CA Drinking Water Standards: ⁽¹⁾			15	50	10	500/1000/1500 ‡,§	20
Federal Drinking Water Standards: ⁽²⁾			15	50	10	500 ‡	20
Well ID	Sample Date	Sample Type	Gross Alpha (pCi/L)	Gross Beta (pCi/L)	Nitrate as Nitrogen (mg/L)	Total Dissolved Solids (mg/L)	Uranium, Dissolved (pCi/L)
22-103	Apr-02-2014		14.9	4.2 J	1.7	520	9.6
	Jul-07-2014		15.5 J	ND (4)	1.9	550	9.4

Notes:

(1) CA Drinking Water Standards are the California Maximum Contaminant Levels (CA MCLs)

(2) Federal Drinking Water Standards are the US Environmental Protection Agency Maximum Contaminant Levels (EPA MCLs). The EPA has granted the California Department of Public Health primacy over drinking water systems.

Bold text indicates detected results that exceed CA MCLs. Bold text for total dissolved solids, chloride, and sulfate (if sampled) indicate that detected results exceed the "upper-level" secondary CA MCL.

-- not applicable

J Indicates result is estimated - Analyte was present but reported value may not be accurate or precise

ND Not detected at the reporting limit shown

mg/L milligrams per liter

pCi/L picocuries per liter

§ The California Secondary MCL for this compound is given as a range: recommended – 500 mg/L, upper level - 1,000 mg/L, and short term - 1,500 mg/L.

‡ A secondary drinking water standard is shown because a primary standard has not been established. A secondary standard is one that may adversely affect the odor or appearance of drinking water.

The gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. The screening level is 50 pCi/L. The California Department of Public Health Detection Limit for Reporting is 4 pCi/L.

The Federal MCL for uranium is 30 micrograms per liter. This is equivalent to the California MCL of 20 pCi/L.