

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**BOARD ORDER NO. R6V-2013-0003
WDID NO. 6B362031001**

REVISED WASTE DISCHARGE REQUIREMENTS

FOR

**PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION**

_____ San Bernardino County _____

The California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Discharger

On June 27, 2012 and August 13, 2012, Pacific Gas and Electric Company (PG&E) submitted an addendum to the March 15, 2012, Report of Waste Discharge (RWD), which collectively constitutes a complete RWD for the proposed two additional surface impoundments at the Hinkley Compressor Station (Facility). PG&E owns the land underlying the proposed Facility. For the purpose of this Order, PG&E is referred to as the "Discharger."

2. Facility

The Discharger is proposing to construct and operate two additional surface impoundments to supplement the three existing surface impoundments at the Facility in the town of Hinkley, San Bernardino County, as shown on Attachment "A," which is attached to and made part of this Order.

For the purposes of this Order, the Facility consists of: 1) compressor station, 2) parking area, 3) five surface impoundments [three existing and two proposed], 4) office area, and 5) any related piping and appurtenances. A Facility map is presented in Attachment "B," which is attached to and made part of this Order.

3. Reason For Action

Revised Waste Discharge Requirements (WDRs) are being issued for the continued operation of three existing surface impoundments and the construction and operation of two additional surface impoundments in the footprint of former surface impoundments.

Two new surface impoundments, Ponds 6R and 7R, are proposed to be built in the footprints of former Ponds 6 and 7, which were closed in 1995. These two new surface impoundments will supplement the evaporative capacity of existing Ponds 4, 5, and 8, and will allow for maintenance of the existing surface impoundments.

The existing surface impoundments do not provide sufficient evaporative capacity for proper operation of the compressor station. During the winter months, the compressor station must reduce cooling tower boiler blowdown rates to meet surface impoundment freeboard requirements. Reduction in the blowdown rates causes higher conductivity of the discharged waste water and can result in damage to the compressor station equipment. Additionally, construction and operation of proposed Ponds 6R and 7R would allow for maintenance of the existing surface impoundments while still operating the compressor station.

4. Order History

On July 11, 1974, the Water Board adopted Board Order No. 6-74-64, which allowed the discharge of waste into five original surface impoundments, Ponds 1 through 5. On July 8, 1982, the Water Board adopted revised WDRs, Board Order No. 6-82-79, for the addition of two surface impoundments, Ponds 6 and 7. On June 14, 1990, the Water Board adopted Board Order No. 6-90-42, which allowed the construction and operation of an additional surface impoundment, Pond 8, and required the Discharger to retrofit existing surface impoundments Ponds 4 and 5 by adding an additional liner. An amendment to Board Order No. 6-90-42 was adopted for the Facility on August 12, 1993. Revised WDRs, Board Order No. 6-97-82, were adopted on July 17, 1997, for closure of five surface impoundments, Ponds 1, 2, 3, 6, and 7. Ponds 4, 5, and 8 are still in place and in service.

5. Enforcement History

On December 29, 1987, Cleanup and Abatement Order (CAO) No. 6-87-160 was issued because wastewater containing hexavalent chromium was discharged at the Facility to unlined ponds, which polluted groundwater. The Order specified dates for submitting plans for site investigation, characterization of hydrogeology, and initiation of cleanup and abatement of hexavalent chromium in the soil and groundwater. Subsequent amendments, CAO No. 6-87-160A1 adopted June 3, 1994, required the Discharger to destroy wells that could provide a conduit for migration of hexavalent chromium to an underlying aquifer and to implement a full-scale groundwater extraction system. CAO No. 6-87-160A2, adopted August 3, 1998, required the Discharger to monitor and to submit reports on the effectiveness of the corrective action activities.

6. Existing Site Conditions

The new surface impoundments are proposed to be installed in the footprint of former surface impoundments which have been closed; the proposed locations are outside of the original discharge and source areas for the hexavalent chromium contamination from the Facility. These two new proposed surface impoundments, Ponds 6R and 7R, are proposed to be installed in the footprint of former surface impoundments, Ponds 6 and 7. Ponds 6 and 7 were identified as clean closed in Board Order No. 6-97-82; however the technical report on which clean closure was

based did not provide data to demonstrate clean closure of these two surface impoundments. This Order requires a sampling plan to verify that Ponds 6 and 7 were clean closed, present no further threat to groundwater, and identify background soil concentration against which to compare when the new surface impoundments are clean closed in the future. These data must be collected prior to the construction of the new surface impoundments, Ponds 6R and 7R.

7. Facility Location

The Facility is located in the town of Hinkley, at the southeast intersection of Community Boulevard and Fairview Road, in Section 2, Township 9N, Range 3W, San Bernardino Baseline and Meridian and is shown on Attachment "B," which is made part of this Order.

8. Waste Classification

The blowdown from the cooling towers at the compressor station accounts for approximately 90% of the discharge to the surface impoundments. The remaining 10% of the discharge to the surface impoundments is comprised of intermittent waste streams from cleaning and maintenance operations.

The wastewater contains concentrations of several constituents, including arsenic, fluoride, hexavalent chromium, magnesium, nitrate, and total dissolved solids (TDS). The wastewater discharged to the surface impoundments is classified as a designated waste. Designated waste is defined in California Water Code (CWC), section 13173, subdivision (b), as "nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan." The predicted quality of wastewater to be discharged to the surface impoundments is included in Attachment "C." These data were derived by analyzing representative samples of the discharge to determine the concentration of chemical constituents.

9. Waste Management Unit Classification

The Surface Impoundments are classified as Class II waste management units, as defined in California Code of Regulations (CCR), title 27, section 20250.

10. Description of the Surface Impoundments

The cooling water blowdown and the intermittent maintenance waste streams from the Facility will be discharged into five lined Class II Surface Impoundments (see Attachment B). Three Surface Impoundments Ponds 4, 5 and 8 are currently in service. Ponds 6R and 7R will be constructed in the future. The Surface

Impoundments must also contain the volume of rain which falls onto the Surface Impoundment areas in a 1,000-year, 24-hour storm event, while maintaining two feet of freeboard.

The liner system of the Surface Impoundments is proposed to be constructed in ascending order as follows:

- a. An 8-inch recompacted native subgrade below the bottom liner, which is moisture conditioned and compacted to 90 percent of the maximum dry density per American Society for Testing and Materials (ASTM) Standard D1557.
- b. A pan lysimeter under the lower-most part of each proposed surface impoundment that consists of a 60-mil high density polyethylene (HDPE) layer and granular drainage material.
- c. A liquid collection and recovery system (LCRS) directly above the pan lysimeter under the lower-most part of each proposed surface impoundment that consists of a geosynthetic clay layer (GCL) overlain by a 60-mil HDPE smooth liner and granular drainage material.
- d. A 60-mil HDPE drain liner.

The surface impoundments will be installed, tested, and inspected in accordance with an accepted Construction Quality Assurance Plan.

Pond 6R is proposed to be constructed on 1.22 acres with a 1.68 million gallon total operating capacity and Pond 7R is proposed to be constructed on 1.26 acres with a total operating capacity of 1.26 million gallons. The Surface Impoundments are to be lined, as described above, and must have no less than 1×10^{-6} cm/sec permeability. The Surface Impoundments will each be equipped with a LCRS directly underneath the deepest portion of each Surface Impoundment. The LCRS is designed to monitor the liner of the Surface Impoundment, and to provide the earliest possible detection of a leak in the liner of the Surface Impoundments. The Surface Impoundments will be equipped with an unsaturated zone monitoring system beneath the LCRS. The Surface Impoundments, as specified in CCR, title 27, section 20320, Table 4.1, are to withstand seismic shaking from a maximum credible earthquake, as defined in CCR, title 27, section 20164.

11. Engineered Alternative to Prescriptive Standard for the Surface Impoundments

The CCR, title 27, includes prescriptive standards for waste management unit construction and allows for engineered alternatives to such standards. The Discharger has proposed engineered alternatives to the CCR, title 27 prescriptive standards for the construction of the Class II Surface Impoundments. CCR, title 27, section 20080, subdivision (b), requires that alternatives shall only be approved

where the Discharger demonstrates that: (1) the construction of prescriptive standard is not feasible because it is unreasonably and unnecessarily burdensome and will cost substantially more than alternatives, which meet the criteria, or is impractical and will not promote attainment of applicable performance standards; and (2) there is a specific engineered alternative that is consistent with the performance goal of the prescriptive standard and affords equivalent protection against water quality impairment.

The prescriptive standard for a Surface Impoundment is a single clay liner or a double-lined system with a leachate collection and removal system, and a hydraulic conductivity of 1×10^{-6} cm/sec. The Discharger proposes an engineered alternative for construction of the Surface Impoundments because construction of a prescriptive clay liner is not feasible at this Facility. Repeated wetting and drying cycles are expected to desiccate and crack the prescriptive compacted clay liner during typical operational conditions. Therefore, cracking would compromise the clay liner and not achieve the performance standard. The engineered alternative for the Surface Impoundments is a triple-layer liner system. The liner includes a layer of geosynthetic clay liner, and two layers of 60-mil HDPE, which are expected to mitigate downward migration of water from the Surface Impoundment. The geosynthetic clay liner is comprised of a powdered sodium bentonite mat with backing of geotextiles on both sides to provide a hydraulic conductivity of 5×10^{-9} cm/sec, which is three orders of magnitude more stringent than prescriptive liner requirements. Furthermore, the Surface Impoundments will be equipped with liquid collection and recovery systems (LCRS), which are lined sumps installed below the lowest portions of the Surface Impoundments. These allow for detection of the vertical migration of liquids and removal of a water sample for testing. Additionally, the Surface Impoundments will be equipped with pan lysimeters below the LCRS to allow for additional monitoring of any vertical migration of liquids below the surface impoundments.

Water Board staff has evaluated these proposed alternatives and has determined that these alternatives meet the CCR, title 27 requirements, is consistent with the performance goal of the prescriptive standards, and affords equivalent protection against water quality impairment.

12. Authorized Disposal Site

The authorized disposal locations for wastewater at the Facility are the five Surface Impoundments (Ponds 4, 5, 8, 6R and 7R).

13. Water Quality Protection Standard

The Water Quality Protection Standard (WQPS) consists of monitoring parameters, constituents of concern (COCs), concentration limits, Monitoring Points, and the Point of Compliance. The WQPS applies over the active life of the Facility, closure period, and the compliance period. The constituents of concern, Monitoring Points,

and Point of Compliance for groundwater and unsaturated zone monitoring are described in MRP No. R6V-2013-0003. This Order includes a time schedule for the Discharger to propose concentration limits for all constituents of concern.

14. Statistical Methods

Statistical analyses of groundwater monitoring data are necessary for the earliest possible detection of measurably significant evidence of a release of waste from the Facility. CCR, title 27, section 20415, subdivision (e)(7), requires statistical data analyses to determine when there is "measurably significant" evidence of a release from the Unit. MRP No. R6V-2013-0003 includes methods for statistical analyses. The monitoring parameters listed in MRP No. R6V-2013-0003 are believed to be the best indicators of a release from the Facility.

15. Detection Monitoring Program

Pursuant to CCR, title 27, sections 20385 and 20420, the Discharger has proposed a detection monitoring program (DMP) for the Facility. The DMP for the Facility consists of monitoring: (1) the LCRS, (2) the pan lysimeters, and (3) groundwater monitoring wells for the presence of constituents of concern from the Facility. The program to monitor the LCRS, the pan lysimeters, and water-bearing media for evidence of a release, as well as the monitoring frequency, is specified in MRP No. R6V-2013-0003.

16. Evaluation Monitoring Program

An evaluation monitoring program (EMP) may be required, pursuant to CCR, title 27, sections 20385 and 20425, in order to evaluate evidence of a release if detection monitoring and verification procedures indicate evidence of a release. The Discharger must monitor groundwater and the unsaturated zone to evaluate changes in water quality and/or physical parameters that indicate a release from the Facility. If the EMP confirms measurably significant evidence of a release, then the Discharger must submit an engineering feasibility study for a corrective action program within 180 days of determination pursuant to CCR, title 27, section 20425, and MRP No. R6V-2013-0003.

17. Corrective Action Program

A corrective action program (CAP) to remediate released wastes from the Facility may be required pursuant to CCR, title 27, sections 20385 and 20430, if results of an EMP prove the presence of a measurably significant release from the Facility.

18. Surface Impoundments Closure Specifications

The Discharger plans to clean-close the Surface Impoundments, pursuant to CCR, title 27, section 21400, at closure, at which time any residual water remaining in the Surface Impoundments will be allowed to evaporate and all residual wastes, including liquids, sludges, precipitates, settled solids, and liner materials will be completely removed, transported, and disposed to a facility permitted to accept such wastes.

The Discharger has submitted a preliminary closure plan and financial estimates to clean-close the surface impoundments. This Order requires that adequate financial assurance mechanisms for closure be submitted by the Discharger to the Water Board prior to construction of the new surface impoundments at the Facility.

19. Site Geology

The soils underlying the Facility are comprised of interbedded sands, gravels, silts, and clays. The sands extend to a depth of approximately 125 to 150 feet below the Facility. Underlying the sands is the Blue Clay aquitard. Between the Blue Clay and bedrock are permeable stratum composed of calcareous sedimentary rock and highly weathered, decomposed, and fractured bedrock that exists as the transitional interface above the granitic bedrock. The thickness of the weathered rock is highly variable, generally ranging between a few feet up to 20 feet thick. The Blue Clay aquitard thins to the west and to the south towards the Mojave River. The depth to bedrock is about 175 feet below the Facility.

The nearest active fault is the northwest-southeast trending Lenwood fault located about one mile southeast of the Facility. Dextral slip is between 0.2 and 1.0 millimeters per year (mm/yr), but can occur at greater values when triggered by other seismic events.

20. Site Hydrogeology and Hydrology

The Facility is located approximately 1 mile north of the Mojave River. The Facility is not within a 100-year floodplain.

Two hydraulically-connected aquifers are within the Mojave groundwater basin, the Floodplain Aquifer and the Regional Aquifer. The Floodplain Aquifer is composed of past and current Mojave River deposits. The surrounding and underlying Regional Aquifer is generally composed of unconsolidated alluvial fan deposits from the surrounding mountains. The Facility is located above the Floodplain Aquifer. The hydrostratigraphy is generally divided into two additional depth-specific aquifers, the Upper Aquifer and the Lower Aquifer. The Upper Aquifer includes the Floodplain Aquifer and portions of the Regional Aquifer and is underlain by the Blue Clay aquitard. Below the Blue Clay aquitard is the deeper, semi-confined Lower

Aquifer. Depth to groundwater in the Upper Aquifer ranges from about 75 to 90 feet below ground surface (bgs).

21. Groundwater Quality

A water sample was collected by the Discharger from groundwater monitoring wells MW-01 and PMW-01 in July and August, 2011. Selected results are presented in Table 1, Groundwater Quality Results, below.

Table 1. Groundwater Quality Results

Constituent	Units	Monitoring Well MW-01 Sample Concentration	Monitoring Well PMW-01 Sample Concentration	MCL
Chloride	mg/L	66	50	NE
Chromium (Hexavalent)	µg/L	25.8	104	NE
Chromium (Total)	µg/L	28.9	99.9	50
Fluoride	mg/L	<0.1	<0.1	2
Magnesium	mg/L	NS	16	NE
Nitrate as Nitrogen	mg/L	2.4	1.3	10
pH	pH units	7.3	7.2	6.5-8.5
Sodium	mg/L	69	68	250
Specific Conductance	µmhos/cm	900	880	900*
Sulfate	mg/L	120	58	NE
Total Dissolved Solids (TDS)	mg/L	540	520	500*

Notes:

* = Secondary MCL

MCL = maximum contaminant level

µg/L = micrograms per liter

µmhos/cm = micromhos per centimeter

mg/L = milligrams per liter

MW = monitoring well

NE = not established

NS = not sampled

22. Water Sources

On-site production wells owned by PG&E provide the water used at the Facility. Production wells used for industrial operations include PGE-15, PGE-12, PGE-13, and PGE-6. A water sample was collected by the Discharger from supply well PGE-15 on December 30, 2011. Water quality data from supply well PGE-15 is shown in Table 2, Water Supply Quality Results, below.

Table 2. Select Water Supply Quality Results

Constituent	Units	Supply Well PGE-15 Sample Concentration	MCL
Fluoride	mg/L	0.34	2
Nitrate as Nitrogen	mg/L	<0.1	10
Arsenic	mg/L	<0.01	0.01
Boron	mg/L	0.102	NE
Magnesium	mg/L	3.30	NE
Chloride	mg/L	56	NE
Hexavalent Chromium	ug/L	<1.0	NE

Constituent	Units	Supply Well PGE-15 Sample Concentration	MCL
pH	pH units	7.62	6.5-8.5
Specific Conductance	µmhos/ cm	350	900*
Sulfate	mg/L	25	250
Total Dissolved Solids (TDS)	mg/L	153	500*

Notes:

* = Secondary MCL

MCL = maximum contaminant level

ug/L = micrograms per liter

µmhos/cm = micromhos per centimeter

mg/L = milligrams per liter

ND = not detected

NE = not established

23. Receiving Waters

The receiving waters are the groundwaters of the Middle Mojave River Valley Groundwater Basin (Department of Water Resources, Groundwater Basin Number 6-41, Basin Plan, Plate 2B, Groundwater Basins, Region 6, South Lahontan).

24. Lahontan Basin Plan

The Water Board adopted a *Water Quality Control Plan for the Lahontan Region* (Basin Plan), which became effective on March 31, 1995. This Order implements the Basin Plan.

25. Beneficial Groundwater Uses

The present and potential beneficial uses of the groundwaters of Middle Mojave River Valley Groundwater Basin (DWR Basin No. 6-41), as set forth and defined in the Basin Plan, are:

- a. (MUN) - Municipal and Domestic Supply,
- b. (AGR) - Agricultural Supply,
- c. (IND) - Industrial Service Supply,
- d. (FRSH) - Freshwater Replenishment, and
- e. (AQUA) - Aquaculture.

26. Site Topography

The topography of the site is relatively flat, and gently sloping downward to the northeast, with elevations ranging from approximately 2,197 feet above mean sea level (msl) to 2,202 feet above msl.

27. Climate

The area typically has hot summers and mild winters. The annual average precipitation in the vicinity of the Facility is less than 5 inches. The net evaporation rate for the area is approximately 78 inches annually (Western Regional Climate Center).

28. Land Uses

The majority of land surrounding the Facility is rural living and agriculture. Wells within a one-mile radius access groundwater for agricultural purposes.

29. Action Leakage Rate

The Discharger has requested that the Water Board allow an action leakage rate (ALR) of liquid through the upper liner of the surface impoundments into the leachate collection sumps. The respective ALRs are based on proposed design dimensions and design specifications of the surface impoundments and on a 1992, United States Environmental Protection Agency (U.S. EPA) guidance document, *Action Leakage Rates for Leak Detection Systems, Supplemental Background Document for the Final Double Liners and Leak Detection Systems Rule for Hazardous Waste Landfills, Waste Piles, and Surface Impoundments*. The numerical ALRs are shown in the Monitoring and Reporting Program (MRP) No. R6V-2013-0003, and are made part of this Order. The MRP includes requirements for monitoring and reporting leakage rates from the LCRS and the type of response actions the Discharger must take if applicable ALRs are exceeded.

30. Known or Reasonably Foreseeable Release from the or Surface Impoundments

The Discharger has submitted a corrective action estimate to address a known or reasonably foreseeable release (KRFR), including a workup of the total likely maximum cost of remediation for a known or reasonably foreseeable release for the three existing surface impoundments and the two proposed surface impoundments, pursuant to CCR, title 27, section 20380, subdivision (b). The analysis includes a proposed corrective action financial assurance mechanism (to cover the estimated corrective action cost) meeting the requirements of CCR, title 27, sections 22220 through 22222 and 22225 *et seq.* This Order requires the Discharger to submit financial assurance mechanisms for a corrective action for a KRFR from the surface impoundments.

If there is measurably significant evidence of a release, the Discharger must submit an engineering feasibility study for corrective action pursuant to CCR, title 27, section 20420, subdivision (k)(6) and must conduct a COC scan meeting the requirements of CCR, title 27, section 20420, subdivision (k)(1). The Discharger must also submit an amended RWD pursuant to CCR, title 27, section 20420, subdivision (k)(5), that proposes suitable revisions to the MRP to establish an EMP meeting CCR, title 27,

section 20425. If necessary, the amended RWD must include the justification for any extension beyond the 90 days allowed prior to making the submittals required under CCR, title 27, section 20425, subdivisions (b), (c), and (d).

31. Financial Assurance

At least 7 days prior to construction of the new surface impoundments at the Facility (for the purposes of closure), and **at least 30 days** prior to discharge (for the purposes of corrective action), the Discharger is required to provide two separate sureties to cover the costs of closure and corrective action (for a reasonably foreseeable release) in accordance with CCR, title 27, sections 22207 and 22222, respectively.

This Order requires the Discharger to obtain and maintain financial instruments and to report yearly to the Water Board the amount of money available in the financial instruments. Annually, the Discharger must report that the amount of financial assurance is adequate, or increase the amount of financial assurance as required under CCR, title 27, sections 22207 and 22222.

32. Other Considerations and Requirements for Discharge

Pursuant to CWC, section 13241, the requirements of this Order take into consideration:

- a. Past, present, and probable future beneficial uses of water.

This Order identifies existing groundwater quality and past, present, and probable future beneficial uses of water, as described in finding Nos. 21, and 25, respectively. The proposed discharge will not adversely affect present or probable future beneficial uses of water including municipal and domestic supply, agricultural supply, industrial service supply, and freshwater replenishment, because the discharge is only authorized within lined surface impoundments and detection monitoring is required to ensure discharges do not reach groundwater.

- b. Environmental characteristics of the hydrographic unit under consideration including the quality of water available thereto.

Finding No. 21 describes the environmental characteristics and quality of water available.

- c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area.

The requirements of this Order will not affect groundwater quality. The Water Board will use its existing authority and these WDRs to ensure protection of water quality from these discharges.

d. Economic considerations.

Water Quality Objectives established in the Basin Plan for the Middle Mojave Valley Groundwater Basin do not subject the Discharger to economic disadvantage as compared to other similar discharges in the Region. This Order will require the Discharger to submit proposals compliant with the requirements of CCR, title 27, and is reasonable.

e. The need for developing housing within the region.

The Discharger is not responsible for developing housing within the region. This Order provides for capacity to collect, store, and evaporate wastewater in Surface Impoundments.

f. The need to develop and use recycled water.

The Discharger does not propose the use of recycled water at this Facility.

33. California Environmental Quality Act

This Project is subject to the provisions of the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.) in accordance with Public Resources Code, section 21065. The Water Board is the CEQA Lead Agency for this Project under the CEQA Guidelines.

The Water Board has identified a number of potential short-term significant effects in the mitigated negative declaration (MND), and has therefore prescribed additional protective measures in this Order to ensure that any potential impacts are reduced to less than significant.

A mitigated negative declaration (MND) was circulated on November 13, 2012. The MND including its Errata and Mitigation Monitoring Plan both dated January 2013, describes the mitigation measures. In addition to circulating the MND, the Water Board provided notice of intent to adopt a MND for the Project (SCH No. 2012111038), pursuant to section 15072 of the CEQA Guidelines (14 Cal. Code Regs. § 15072.) The MND reflects the Water Board's independent judgment and analysis that the proposed project, with mitigation measures incorporated into this WDR, will not have a significant effect on the environment. A water quality Monitoring and Reporting Program with all of its associated attachments (MRP Attachments) and the CEQA Mitigation Monitoring Plan (Attachment E to the WDR) are incorporated into this Order. After consideration of comments received during the public review process, Water Board hereby adopts the MND. The documents or

other materials, which constitute the record, are located at 14440 Civic Drive, Suite 200, Victorville, California. The Water Board Executive Officer will file a Notice of Determination to the State Clearinghouse within five days from the issuance of this Order and is authorized to sign the Certificate of Fee Exemption and to transmit it to the California Department of Fish and Game (CDFG) in lieu of payment of the CDFG filing fee.

34. Technical and Monitoring Reports

The Discharger must submit technical and monitoring reports in compliance with this Order as described in Monitoring and Reporting Program (MRP) No. R6V-2013-0003 which is attached to and made part of this Order.

35. Notification of Interested Parties

The Water Board has notified the Discharger and all known interested agencies and persons of its intent to adopt WDRs for the project.

36. Right to Petition

Any person aggrieved by this action of the Water Board may petition the State Water Board to review the action in accordance with CWC, section 13320, and CCR, title 23, sections 2050et seq. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality, or will be provided upon request.

37. Consideration of Interested Parties

The Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Dischargers shall comply with the following:

I. RECEIVING WATER LIMITATIONS

The Discharger shall not cause the existing water quality to be degraded. Under no circumstances shall the Discharger cause the presence of the following substances or conditions in groundwaters of the Middle Mojave River Valley Groundwater Basin.

- A. Bacteria – Groundwaters designated as MUN, the medium concentration of coliform organisms, over any seven-day period, must be less than 1.1 Most Probable Number per 100 milliliters (MPN/100 mL) in groundwaters.
- B. Chemical Constituents – Groundwaters designated as MUN must not contain concentrations of chemical constituents in excess of the Maximum Contaminant Levels (MCL) or Secondary MCL (SMCL) based upon drinking water standards specified in the following provisions of CCR, title 22: Table 64431-A of section 64431 (Inorganic Chemicals), Table 64444-A of section 64444 (Organic Chemicals), Table 64449-A of section 64449 (SMCLs – Consumer Acceptance Contaminant Levels), and Table 64449-B of section 64449 (SMCLs – Consumer Acceptance Contaminant Level Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect.

Groundwaters designated as AGR must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses (i.e., agricultural purposes).

Groundwaters must not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

- C. Radioactivity – Groundwater designated MUN must not contain concentrations of radionuclides in excess of limits specified in CCR, title 22, section 64442, Table 64442, and section 64443, Table 64443, including future changes as the changes take effect.
- D. Taste and Odors – Groundwaters must not contain taste or odor-producing substances in concentrations that cause a nuisance or that adversely affect beneficial uses. For groundwaters designated as MUN, at a minimum, concentrations must not exceed adopted Secondary MCLs as specified in CCR, Title 22, Table 64449-A of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Level) and Table 64449-B of section 64449 (Secondary MCLs – Consumer Acceptance Contaminant Levels Ranges) including future changes as the changes take effect.
- E. Color – Groundwaters must not contain color-producing substances from tracers in concentrations that cause a nuisance or that adversely affect beneficial uses.
- F. Toxic Substances – Any presence of toxic substances in concentrations that individually, collectively, or cumulatively cause a detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.

II. REQUIREMENTS AND PROHIBITIONS

A. General

1. The discharge must not cause or threaten to cause a condition of pollution or nuisance as defined in CWC, section 13050.
2. There must be no discharge, bypass, or diversion of wastewater from the collection, conveyance, or disposal facilities to adjacent land areas or surface waters.
3. Surface drainage within the Surface Impoundments must be contained within the Surface Impoundments. No water contained within the Surface Impoundments is to be discharged outside the Surface Impoundments, unless it is to a location approved by the Water Board Executive Officer. The Discharger must either maintain a zero discharge Facility or must maintain a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program and Reporting Requirements in accordance with State Water Resources Control Board Order No. 97-03-DWQ, and future promulgated general stormwater permits.
4. All facilities used for the collection, conveyance, or disposal of waste must be adequately protected against overflow, washout, inundation, structural damage, or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 1,000 years (CCR, title 27, section 20320, Table 4.1).
5. The discharge of hazardous waste to the Surface Impoundments or generation of hazardous waste due to evaporation in the Surface Impoundments is prohibited.
6. The discharge of solid wastes, leachate, wastewater, or any other deleterious materials to the groundwaters of the Middle Mojave River Valley Groundwater Basin is prohibited.
7. The discharge of waste, except to the authorized Surface Impoundments, is prohibited.
8. The discharge of waste, as defined in CWC, section 13050, subdivision (d), that causes a violation of any narrative Water Quality Objective (WQO) contained in the Basin Plan, including the Nondegradation Objective, is prohibited.

9. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited.
10. The discharge must not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Surface Impoundments if such waste constituents could migrate to waters of the State – in either liquid or gaseous phase – and cause a condition of nuisance, degradation, contamination, or pollution.
11. The discharge of waste in a manner that does not maintain a five-foot separation between the waste and the seasonal high groundwater table is prohibited, pursuant to CCR, title 27, section 20240, subdivision (c).
12. The integrity of the active and proposed Surface Impoundments must be maintained throughout the life of the waste management units and must not be diminished as a result of any maintenance operation.
13. The Discharger must maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with these WDRs.
14. At closure, the Facility must be closed in accordance with a Final Closure Plan approved by the Water Board.
15. The Discharger must at all times maintain adequate and viable financial assurances acceptable to the Water Board Executive Officer for costs associated with closure and corrective action for all known or reasonably foreseeable releases.

B. Surface Impoundments

1. Proposed Ponds 6R and 7R must be constructed to contain the waste and the volume of rain which falls onto the surface impoundment areas in a 1,000-year, 24-hour storm event, while maintaining two feet of freeboard. The liner system must be constructed as described in ascending order, as described in Finding 10, as follows:
 - a. An 8-inch recompacted native subgrade below the bottom liner, which is moisture conditioned and compacted to 90 percent of the maximum dry density per ASTM Standard D1557.

- b. A pan lysimeter under the lower-most part of each proposed surface impoundment that consists of a 60-mil HDPE layer and granular drainage material.
- c. A LCRS directly above the pan lysimeter under the lower-most part of each proposed surface impoundment that consists of a geosynthetic clay layer overlain by a 60-mil HDPE smooth liner and granular drainage material.
- d. A 60-mil HDPE drain liner.

The proposed surface impoundments must be constructed to withstand the seismic shaking from a maximum credible earthquake, as defined in CCR, title 27, section 20164.

2. The Surface Impoundment freeboard, the vertical distance between the liquid surface elevation and the lowest part of the pond dike or the invert of an overflow structure, must be a minimum of two feet at all times, as specified in CCR, title 27, section 20375.
3. All lined facilities must be effectively sealed to prevent the exfiltration of liquids. For this project, "effectively sealed" facilities are Class II waste management units that are designed and constructed to meet the requirements of CCR, title 27, sections 20310, 20320, and 20330.

C. Leachate Collection and Recovery Systems

1. If a quantity of leachate is detected in a LCRS of the Surface Impoundments above the ALR, which is set forth in the MRP, the Discharger must immediately take steps to locate and repair leak(s) in the liner system and comply with the notice requirements presented in MRP No. R6V-2013-0003, Section IV.G., "Unscheduled Reports to be Filed with the Water Board." If repairs do not result in a leakage rate less than the required ALR, the Discharger must immediately cease the discharge of waste, including leachate, to the Surface Impoundment(s) and notify the Water Board. The notification shall include a timetable for remedial action to repair the liner of the Surface Impoundment(s).
2. The LCRS must be operated to function without clogging throughout the life of the project.
3. Any leachate collected in the LCRS must either be returned to the Surface Impoundments or disposed at a Class II Waste Management Unit.

D. Detection Monitoring Program

The Discharger must maintain a detection monitoring program as required in CCR, title 27, section 20420.

E. Evaluation Monitoring Program

The Discharger must perform an evaluation monitoring program when there is a measurably significant evidence of release as required in CCR, title 27, section 20385, subdivision (a)(2) or (3). The Discharger must maintain the EMP as long as there is measurably significant evidence of a release from the Surface Impoundment(s) as required in CCR, title 27, section 20425. The EMP must be utilized to delineate within 90 days of initiating an EMP the nature and extent of the release, as well as to develop, propose, and support corrective action measures to be implemented in a CAP.

F. Corrective Action Program (CAP)

The Discharger must institute a corrective action program as required in CCR, title 27, section 20430, following completion of the EMP, in response to measurably significant evidence of a release.

G. Electronic Submittal of Information

Pursuant to CCR, title 23, section 3890, the Discharger must submit reports, including soil, vapor, and water data, prepared for the purpose of subsurface investigation or remediation of a discharge of waste to land subject to Division 2 of title 27 electronically over the internet to the State Water Board's Geotracker system. This requirement is in addition to, and not superseded by, any other applicable reporting requirement.

III. WATER QUALITY MONITORING AND RESPONSE PROGRAMS

A. Water Quality Protection Standard

1. The Discharger must submit a RWD to the Water Board at least 140 days before initiating discharge of any new constituents of concern to the Surface Impoundments. Before a new discharge commences, the Discharger must estimate the concentration for such constituents within the wastewater stream and submit written statistical method(s) in order to detect a release of such constituents.
2. At any given time, the concentration limit for each monitoring parameter and constituent of concern must be equal to the background data set of that constituent. The background data set for

each monitoring point/constituent pair should be comprised of at least eight data points, collected quarterly.

3. If the Discharger or Water Board Executive Officer determines that concentration limits were or are exceeded, the Discharger may immediately institute verification procedures upon such determination as specified below or submit an amended RWD within 90 days of such determination in order to establish an evaluation monitoring program. In the event of a release, unless the amended RWD (proposing an EMP) proposes and substantiates a longer period, the Discharger will only have 90 days, once the Water Board authorizes the initiation of the EMP, to complete the delineation, develop a suite of proposed corrective action measures, and submit a proposed corrective action program (CAP) for adoption by the Water Board.
4. Monitoring Wells and/or unsaturated zone samples must be used to obtain background data and to detect a release from the Facility.

B. Statistical Methods

1. The Discharger must use approved statistical data analysis methods to evaluate Point of Compliance groundwater data in order to determine measurably significant evidence of a release from the Surface Impoundments, as required by CCR, title 27, section 20415, subdivision (e). Analysis must be conducted in accordance with the statistical methods described in MRP No. R6V-2013-0003.
2. The Discharger must determine, within 45 days after completion of sampling, whether there is measurably significant evidence of a release from the Surface Impoundments at each Monitoring Point. The analysis must consider all monitoring parameters and constituents of concern. The Executive Officer may also make an independent finding that there is measurably significant evidence of a release or physical evidence of a release.
3. If there is measurably significant evidence of a release, the Discharger must immediately notify the Water Board by certified mail (see notification procedures contained in MRP No. R6V-2013-0003. Subsequently, the Discharger may immediately initiate verification procedures as specified below in Section III.D., "Verification Procedures," whenever there is a determination by the Discharger or Executive Officer that there is measurably significant evidence of a release.

4. If the Discharger does not use verification procedures to evaluate evidence of a release, and there is confirmation that there is measurably significant evidence of a release, then the Discharger is required to submit, within 90 days of such a confirmation, an amended RWD in order to establish evaluation monitoring pursuant to subsection II.C., "Evaluation Monitoring Program," or make a demonstration to the Water Board that there is a source other than the Surface Impoundments that caused evidence of a release (see notification procedures contained in MRP No. R6V-2013-0003 section IV.G., "Unscheduled Reports to be Filed With the Water Board").

C. Physical Evidence of a Release

The Discharger must determine whether there is significant physical evidence of a release from the Surface Impoundments. Significant physical evidence may include unexplained volumetric changes in the Surface Impoundments, unexplained stress in biological communities, unexplained changes in soil characteristics, unexplained changes in soil moisture content, visible signs of leachate migration, unexplained water table mounding beneath or adjacent to the Facility, and/or any other change in the environment that could reasonably be expected to be the result of a release from the Facility (see Section IV.G., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2013-0003.

D. Verification Procedures

1. The Discharger must immediately initiate verification procedures as specified below, whenever there is a determination by the Discharger or Executive Officer that there is evidence of a release. If the Discharger declines the opportunity to conduct verification procedures, the Discharger must submit a technical report, as described in Section III.E., below, under the heading "Technical Report Without Verification Procedures."
2. The verification procedure must only be performed for the constituent(s) that has shown a measurably significant evidence of a release and must be performed for those Monitoring Points at which a release is indicated.
3. The Discharger must either conduct a composite retest using data from the initial sampling event with all data obtained from the resampling event or must conduct a discrete retest in which only data obtained from the resampling event must be analyzed to verify evidence of a release, or must propose a pass 1-of-3 retesting approach using quarterly samples, as an engineered alternative.

4. The Discharger must report to the Water Board, by certified mail, the results of the verification procedure, as well as all concentration data collected for use in the retest, within seven days of the last laboratory analysis.
5. If the Discharger or Executive Officer verify evidence of a release, the Discharger is required to submit a technical report to the Water Board, pursuant to Water Code, section 13267, subdivision (b), within 90 days of such a determination that there is, or was, a release. The report must propose an evaluation monitoring program (see subsection, II.E., entitled, "Evaluation Monitoring Program"), or, make a demonstration to the Water Board that there is a source other than the Facility that caused evidence of a release (see notification procedures contained in MRP No. R6V-2013-0003).

E. Technical Report without Verification Procedures

If the Discharger chooses not to initiate verification procedures after there has been a determination made for evidence of a release, the Discharger is required to submit, within 90 days of such confirmation, an amended RWD in order to establish an Evaluation Monitoring Program or demonstrate to the Water Board that there is a source other than the Surface Impoundment that caused evidence of a release (see Section IV.G., "Unscheduled Reports to be Filed With the Water Board," of MRP No. R6V-2013-0003).

F. Monitoring and Reporting

1. Pursuant to Water Code, section 13267, subdivision (b), the Discharger must comply with the MRP as established in the attached MRP No. R6V-2013-0003 (Attachment F), and as specified by the Executive Officer. The MRP may be modified by the Water Board Executive Officer.
2. The Discharger must comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of MRP No. R6V-2013-0003.

IV. PROVISIONS

A. Rescission of WDRs

Board Order No. 6-97-82 is hereby rescinded.

B. CEQA Compliance

The Discharger must conduct the project in accordance with its project application submittals and in accordance with the Mitigation Monitoring Plan in Attachment "E", which is made a part of this Order. The Discharger must submit all required reports as specified in the Mitigation Monitoring Plan to the Water Board.

C. Standard Provisions

The Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment "D," which is made part of this Order.

D. Claim of Copyright of Other Protection

Any and all reports and other documents submitted to the Lahontan Water Board pursuant to this request will need to be copied for some or all of the following reasons: 1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, 2) any further proceedings of the Lahontan Water Board and the State Water Board, 3) any court proceeding that may involve the document, and 4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Discharger or its contractor(s) claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Lahontan Water Board's purposes and will result in the document being returned to the Discharger as if the task had not been completed.

E. Closure Plan

The preliminary closure plans must be updated if there is a substantial change in operations or costs for closure. A report must be submitted annually indicating conformance with existing operations. This report may be included in the annual monitoring report as required in MRP No. R6V-2013-0003. Pursuant to CCR, title 27, section 21780, final plans must be submitted at least 140 days prior to beginning any partial or final closure activities, or prior to discontinuing the use of the Facility for waste treatment, storage, or disposal. The final plans must be prepared by or under the supervision of either a California registered civil engineer or a certified engineering geologist and be in compliance with CCR, title 27, sections 21400 and 21410.

F. Modifications to the Facility

If the Discharger intends to expand the Facility or the capacity of the Surface Impoundments, a report must be filed **no later than 140 days prior** to the anticipated change, containing a detailed plan for Facility expansion. This plan must include, but is not limited to, a time schedule for studies, design, and other steps needed to provide additional capacity, and must be done in accordance with an accepted construction quality control plan.

V. TIME SCHEDULE

A. Sampling and Analysis Plan

At least 90 days prior to construction of new surface impoundments, Ponds 6R and 7R, the Discharger must submit a Sampling and Analysis Plan (SAP) to confirm that Ponds 6 and 7 were clean-closed and present no threat to water quality. The SAP must include procedures for sampling and analyses of the existing conditions in the footprint of former surface impoundments, Ponds 6 and 7.

B. Soils Report

At least 30 days prior to construction to proposed surface impoundments Ponds 6R and 7R, the Discharger must submit a Background Native Soils Report that characterizes the soil at the proposed new surface impoundments for the constituents of concern listed in Table 1 (Attachment A of MRP No. R6V-2013-0003).

C. Financial Assurance Documents

An instrument of Financial Assurance to cover the costs of closure must be submitted **at least 7 days prior** to construction. A separate instrument of Financial Assurance to cover the costs of corrective action for a reasonably foreseeable release from the Facility must be submitted **at least 30 days prior to** discharge to the Surface Impoundments. Yearly thereafter, the Discharger must submit two separate Instruments of Financial Assurance acceptable to the Water Board and adequate to cover the costs of closure and corrective action for a reasonably foreseeable release from the Facility, respectively. An increase may be necessary due to inflation, a change in regulatory requirements, a change in the approved closure plan, or other unforeseen events.

D. Final Construction Quality Assurance Report

No later than 180 days following the completion of construction of the Facility, and **at least 60 days** prior to discharge onto the newly constructed Surface Impoundments, a Final Construction Quality Assurance Report, required in CCR, title 27, section 20324, subdivision (d)(1)(C), must be submitted to the Water Board for review and acceptance. The report must be certified by a registered civil engineer or a certified engineering geologist. It must contain sufficient information and test results to verify that construction was in accordance with the submitted design plans and specifications and with the accepted engineered alternative to the prescriptive standards and performance goals of CCR, title 27.

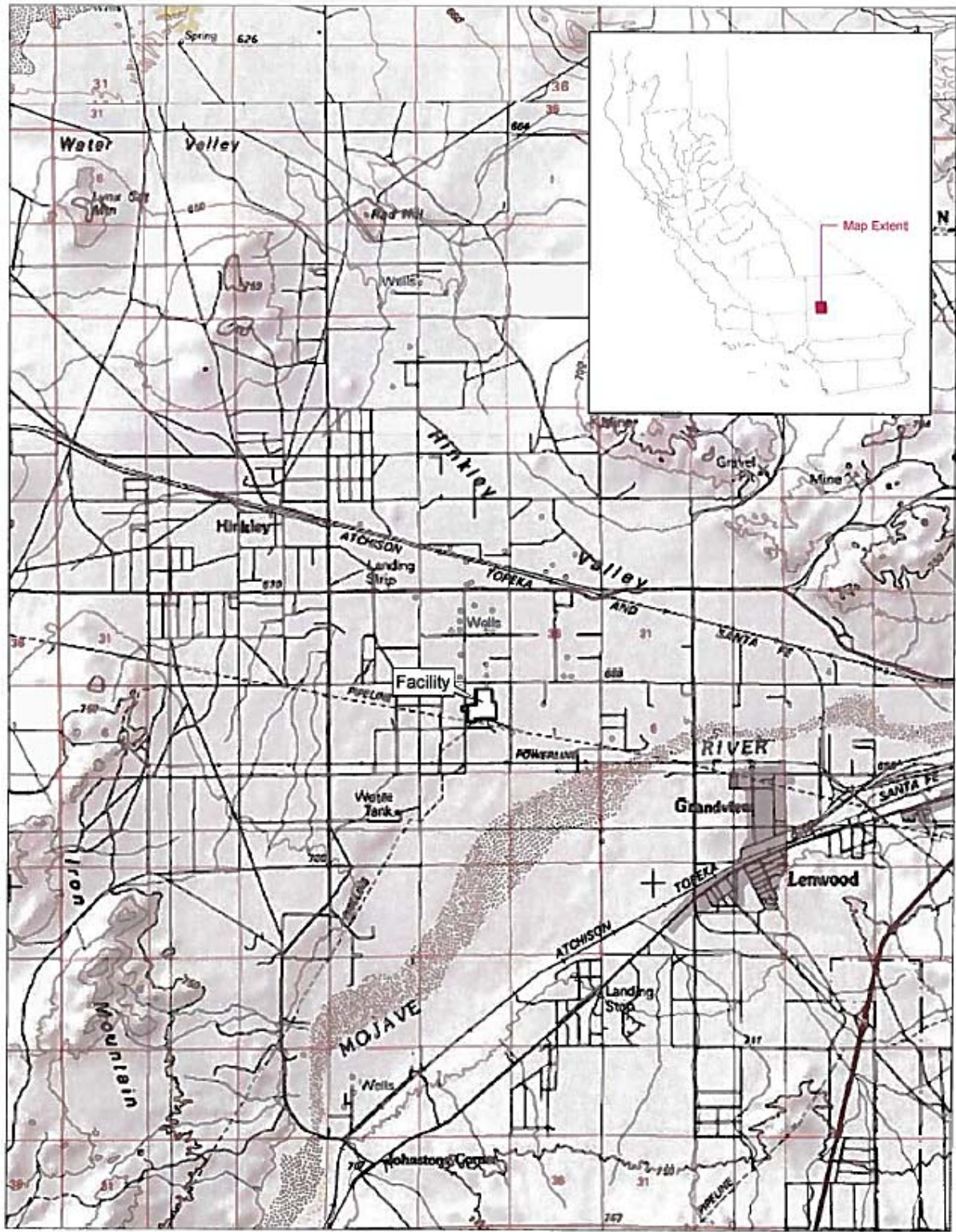
E. Water Quality Protection Standard

No later than 760 days following construction (8 quarters of monitoring, plus 30 days to generate the Water Quality Protection Standard), the Discharger must propose for acceptance by the Water Board a Water Quality Protection Standard, which includes concentrations limits that define background water quality for all constituents of concern and for each Point of Compliance and for the additional monitoring points for which a Water Quality Protection Standard has not yet been developed. The report must be certified by a California registered civil engineer or a California registered professional geologist.

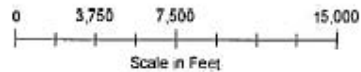
I, Patty Z. Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Board, Lahontan Region, on January 16, 2013.


PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

- Attachments:
- A. Vicinity Map
 - B. Location Map
 - C. Wastewater Discharge Sample Results, Dec. 30, 2011
 - D. Standard Provisions for Waste Discharge Requirements
 - E. CEQA Mitigation Monitoring Program
 - F. Monitoring and Reporting Program No. R6V-2013-0003



Source: USGS, 1982



Pacific Gas & Electric

FIGURE 2-1

Facility Location
Hinkley Compressor Station
Hinkley, CA



Source: NAIP, 2011



Pacific Gas & Electric

FIGURE 2-2

Aerial View of Facility
Hinkley Compressor Station
Hinkley, CA

**Waste Characterization
Sample Results
December 30, 2011**

Constituent	Discharge Concentrations	Units
Antimony	<0.015	mg/L
Arsenic	0.041	mg/L
Barium	0.531	mg/L
Beryllium	<0.01	mg/L
Boron	2.02	mg/L
Bromoform	14	ug/L
Cadmium	<0.01	mg/L
Calcium	241	mg/L
Chloride	300	mg/L
Chromium	0.0102	mg/L
Chromium, Hexavalent	3.1	ug/L
Cobalt	<0.01	mg/L
Copper	0.0253	mg/L
Fish Bioassay	25.7	mg/L
Fluoride	2.7	mg/L
Iron	0.605	mg/L
Lead	<0.01	mg/L
Magnesium	42.9	mg/L
Manganese	0.0102	mg/L
Mercury	<0.0005	mg/L
Molybdenum	0.16	mg/L
Nickel	<0.01	mg/L
Nitrate - as Nitrogen	18	mg/L
Nitrite - as Nitrogen	<0.1	mg/L
Organic Lead	<0.3	mg/L
pH	8.51	pH Units
o-Phosphate as P	1.8	mg/L
Potassium	18.4	mg/L
SC	2600	umhos/cm
Selenium	<0.015	mg/L
Silver	<0.005	mg/L
Sodium	389	mg/L
Sulfate	970	mg/L
TDS	2270	mg/L
Thallium	<0.015	mg/L
Total Alkalinity	140	mg/L
Total Anions	32.88	Meq/L
Total Cations	32.98	Meq/L
Total Chromium	<0.01	mg/L
Vanadium	0.123	mg/L
Zinc	0.169	mg/L

Meq/L = Milliequivalents of solute per liter of solution

mg/L = Milligrams per liter

ND = Not detected above reported concentration

NA = Constituent not reported or not analyzed

SC = Specific Conductance

TDS = Total Dissolved Solids

ug/L = Micrograms per liter

umhos/cm = Micromhos per centimeter

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation.
- f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

MITIGATION MONITORING PLAN

**CLASS II SURFACE IMPOUNDMENTS 6R AND 7R
PG&E HINKLEY COMPRESSOR STATION, HINKLEY, CA
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION**

January 2013

ICF International. 2013. Mitigation Monitoring Plan. Class II Surface Impoundments 6R and 7R PG&E Hinkley Compressor Station Hinkley, California Initial Study/Mitigated Negative Declaration. January. (ICF 00569.12) San Francisco, CA. Prepared for Lahontan Regional Water Quality Control Board, Victorville, CA.

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Mitigation Monitoring Plan

Introduction

The Lahontan Regional Water Quality Control Board, as Lead Agency under the California Environmental Quality Act (CEQA) and State CEQA Guidelines, has prepared a Initial Study/Mitigated Negative Declaration for PG&E Hinkley Compressor Station Hinkley, California. When a lead agency makes findings on significant effects identified in an Initial Study/Mitigated Negative Declaration, it must also adopt a program for reporting or monitoring mitigation measures that were adopted or made conditions of project approval (Public Resources Code [PRC] Section 21081.6[a]; State CEQA Guidelines Sections 15091[d], 15097).

This document represents the mitigation monitoring plan (MMP) prepared by the Lahontan Regional Water Quality Control Board for the Project. This MMP includes all measures required to reduce potentially significant environmental impacts to a less-than-significant level. It also identifies the timing of implementation and the entities responsible for implementing the mitigation and monitoring the mitigation. The mitigation measures, timing, and responsibility are summarized in Table 1, and the full text of the mitigation measures follows.

This MMP has been prepared by the Lahontan Regional Water Quality Control Board, with technical assistance from ICF International, an environmental consulting firm. Questions should be directed to Lisa Dernbach at the Lahontan Regional Water Quality Control Board.

Contact Information:

Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

Table 1. Mitigation Monitoring Plan – Summary of Mitigation Measures

Mitigation Measure	Implementation Timing	Implementation Responsibility	Monitoring Responsibility¹	Monitoring Notes
BIO-MM-1: Implement desert tortoise protection measures before and during construction.	Prior to and During Construction	Project Applicant with qualified biologist	Lahontan Regional Water Quality Control Board	
BIO-MM-2: Implement burrowing owl protection measures before and during construction.	Prior to and During Construction	Project Applicant with qualified biologist	Lahontan Regional Water Quality Control Board	
BIO-MM-3: Implement American badger and desert kit fox protection measure prior to and during construction.	Prior to and During Construction	Project Applicant with qualified biologist	Lahontan Regional Water Quality Control Board	
BIO-MM-4: Implement loggerhead shrike and other breeding bird protection measures during construction.	Prior to and During Construction	Project Applicant with qualified biologist	Lahontan Regional Water Quality Control Board	
BIO-MM-5: Prepare and conduct a sensitive species worker awareness program.	Prior to and During Construction	Project Applicant with qualified biologist or construction monitor	Lahontan Regional Water Quality Control Board	
BIO-MM-6: Maintain a log for biological resources mitigation measures.	Prior to, During and After Construction	Project Applicant with qualified biologist	Lahontan Regional Water Quality Control Board	
CUL-MM-1: Stop work if cultural resources are encountered during ground-disturbing activities.	During Construction	Project Applicant with Construction Contractor	Lahontan Regional Water Quality Control Board	
GHG-MM-1: Implement San Bernardino County GHG construction standards during construction.	Prior to and During Construction	Project Applicant with Construction contractor	Lahontan Regional Water Quality Control Board	
NOI-MM-1: Restrict construction activities to day time hours and weekdays.	During Construction	Project Applicant with Construction contractor	Lahontan Regional Water Quality Control Board	

Mitigation Measure	Implementation Timing	Implementation Responsibility	Monitoring Responsibility ¹	Monitoring Notes
TRA-MM-1: Implement traffic control measures during construction.	During Construction	Project Applicant with Construction contractor	Lahontan Regional Water Quality Control Board	

¹ The Lahontan Water Board may hire a qualified contractor to conduct mitigation monitoring.

Mitigation Measures

Biological Resources

Mitigation Measure BIO-1: Implement desert tortoise protection measures before and during construction. The project applicant will ensure the following measures are implemented and included in construction specifications.

- Protocol surveys for desert tortoise were conducted in October 2011. Because protocol surveys are only valid for one year if no presence was found, a biologist will conduct USFWS protocol-surveys for desert tortoise based on the 2010 United States Fish and Wildlife Service survey protocol. These surveys will be conducted during the desert tortoise's most active periods [April through May or September through October when air temperatures are below 40° C (104° F)].
- Prior to surface disturbance and construction activities, a qualified biologist will conduct a preconstruction clearance survey for desert tortoise within the Project area to ensure that all tortoise are absent, or that any tortoises that are present move passively off site and out of harm's way. The protocol (U.S. Fish and Wildlife Service 2010) states that two consecutive surveys will be conducted immediately prior to surface disturbance within the Project area.
- Following the pre-construction survey and prior to surface disturbance, the construction contractor in coordination with a qualified biologist will place desert tortoise exclusion fencing along the perimeter of the proposed work areas to prevent encounters with desert tortoise during construction activities. The specifications of the desert tortoise exclusion fencing will follow USFWS (Desert Tortoise Field Manual: Chapter 8. Desert Tortoise Exclusion Fence) (U.S. Fish and Wildlife Service 2009).
- If desert tortoises are found to occupy the project area during the protocol survey, preconstruction clearance survey, or active construction phase, all work will be halted and consultation with USFWS and CDFG will be required to determine how the project will proceed. If there is a potential for "take" of tortoise (as defined by federal and state endangered species acts) then an Incidental Take Permit (ITP) will be required from FWS and/or CDFG. The authorized biologist in consultation with FWS/CDFG will then determine whether additional surveys or fencing are needed. Tortoises will not be moved without an ITP.
- A Translocation Plan will be prepared and submitted to CDFG and USWFS as part of the ITP application. Unless otherwise directed by CDFG and USFWS, any desert tortoises found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat within 500 m of their original location. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Desert tortoise translocation will follow Guidelines for Handling Desert Tortoise (Desert Tortoise Field Manual: Chapter 7; USFWS 2009) at all times if handling tortoises is required.

- A qualified biologist will conduct biological monitoring during work hours and conduct daily pre-construction clearance surveys in areas to be disturbed until temporary tortoise-proof fencing has been installed to exclude desert tortoises from entering the work area. The qualified biologist will also inspect the condition of tortoise-proof fencing. If desert tortoises are found within the construction areas, a qualified biologist will ensure it moves away passively.
- Once desert tortoise-proof fence is in place, daily biological monitoring will be conducted. The biological monitor will have the authority to stop all activities until appropriate corrective measures have been completed.
- Work shall be restricted to daylight hours, except during an emergency. Traffic speed shall be maintained at 15 mph or less in the work area.
- Until tortoise-proof fencing is in place around the Project area, no open trenches, excavations or other potential trap hazards will be left unfenced or uncovered overnight. These hazards will be removed each day prior to the work crew and biologist leaving the Project area as long as it is not fully enclosed by tortoise-proof fencing.
- Until tortoise-proof fencing is in place around the Project area, parked vehicles and equipment within the Project area will be inspected by workers (as instructed through the project environmental awareness training) prior to being moved each day. If a tortoise is found beneath vehicles or equipment, it will be monitored until it moves out of the area. Under no circumstances should the tortoise be moved or touched.
- All construction activities, vehicle parking, equipment and material storage areas will be contained within the area surrounded by tortoise-proof fencing.
- Prior to and during construction, all desert tortoises sighted within the Project area will be immediately reported to the qualified biologist and project foreman, and any construction activity that could potentially jeopardize the tortoise will be halted immediately until the desert tortoise moves passively (on its own) from harm's way. Desert tortoises observed in the Project area will be monitored and allowed to move out of the project area passively.
- If a desert tortoise is injured or killed, the authorized biologist will be notified, the injury or death documented, and the animal taken to a qualified veterinarian or the carcass removed by the biologist. If an injured desert tortoise is identified that may have been affected by Project-related activities, a qualified biologist will immediately transport the animal to a veterinary clinic approved by CDFG. PG&E will be responsible for payment of any veterinarian bills for injured tortoises. CDFG and USFWS will be notified in writing within five calendar days, with photographs and a written description of any injury/mortality, circumstances, probable cause and recommendations for avoidance of future incidents. The agencies will assess the final condition of the animal if it recovers.
- To minimize attractiveness to desert tortoise predators (e.g., common ravens and feral dogs), trash and food items will be contained in closed containers and will be removed from the Project site at the end of each work day. No pets or firearms will be permitted in the Project area.
- Following completion of the construction phase of the Project, the applicant will improve the existing chain link fence around the Compressor Station facility, which includes the

surface impoundments, to eliminate large gaps between the fence and the ground surface to prevent desert tortoise from entering the Project area. The applicant will maintain the fence to ensure there are no gaps, which will reduce the likelihood that desert tortoise or other wildlife move into the Project area, thus minimizing entrapment or negative interactions with tortoises during Project operation.

Mitigation Measure BIO-2: Implement burrowing owl protection measures before and during construction. The project applicant will ensure the following measures are implemented and included in construction specifications.

- Protocol-level surveys for burrowing owls will be conducted according to current CDFG protocols (currently CDFG 2012c), or any CDFG approved variation. The nesting season survey window will begin as early as February 15 and no later than April 15, and continue through August 31.
- Prior to construction, a qualified biologist will conduct a preconstruction survey for burrowing owls no greater than 30 days prior to commencing ground disturbing or construction activities, with a second preconstruction survey within 24 hours prior to commencing ground disturbing or construction activities. The limits of this preconstruction survey will include the disturbance area and a 400-foot buffer.
- If during the protocol-level surveys or the preconstruction survey burrowing owl are observed, the following mitigation measures will be applied:
 - As compensation for the direct loss of burrowing owl nesting and foraging habitat, habitat will be acquired and permanently protected at a ratio determined through consultation with CDFG. The minimum ratio will be 6.5 acres per pair or single bird.
 - A non-wasting endowment account for the long-term management of the preservation site for burrowing owls will be established. The site will be managed for the benefit of burrowing owls. The preservation site, site management, and endowment will be approved by the Lead Agency after consultation with CDFG.
 - All owls associated with occupied burrows that will be directly impacted (temporarily or permanently) by the project will be relocated and the following measures will be implemented to avoid take of owls:
 - Occupied burrows will not be disturbed during the nesting season of February 1 through August 31, unless a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.
 - Owls will be relocated by a qualified biologist from any occupied burrows that will be impacted by project activities. Suitable habitat must be available adjacent to or near the disturbance site or artificial burrows will need to be provided nearby. Once the biologist has confirmed that the owls have left the burrow, burrows will be excavated using hand tools and refilled to prevent reoccupation.
 - All relocation will be approved by the Lahontan Water Board after consultation with CDFG. The permitted biologist will monitor the relocated owls a minimum

of three days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring will be submitted to the Lead Agency and CDFG within 30 days following completion of the relocation and monitoring of the owls.

- A Burrowing Owl Mitigation and Monitoring Plan will be submitted to the Lahontan Water Board and the CDFG for review and approval prior to relocation of owls. The Burrowing Owl Mitigation and Monitoring Plan will describe proposed relocation and monitoring plans. The plan will include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location, and type of burrows) will also be included in the plan. The Plan will also describe proposed off-site areas to preserve to compensate for impacts to burrowing owls/occupied burrows at the project site.
- If burrowing owls take occupancy in the Project area before or during construction, the construction contractor will ensure that work-exclusion buffers are maintained. Work will not occur within 160 feet of occupied burrows during the non-breeding season (September 1 through January 31) or within 250 feet during the breeding season (February 1 through August 31), unless otherwise approved by the monitoring biologist and CDFG. A qualified biologist and CDFG will determine if burrowing owls and their habitat can be protected in place on or adjacent to a Project area with the use of buffer zones, visual screens (such as hay bales) or other feasible measures while Project activities are occurring to minimize disturbance impacts.
- If owls are identified during construction, on-site passive relocation will be avoided to the greatest extent practicable, and only implemented if avoidance cannot be met. Passive relocation is defined as encouraging owls to move from occupied burrows to alternate natural or artificial burrows. Any passive relocation plan will need to be approved by the CDFG.

Mitigation Measure BIO-MM-3: Implement American badger and desert kit fox protection measure prior to and during construction. The project applicant will ensure the following measures are implemented and included in construction specifications to avoid and minimize impacts to the American badger and desert kit fox.

- If there is evidence that a burrow may be occupied by a badger or a kit fox during preconstruction surveys (see BIO-1) and if construction will occur during the natal season, all construction activities will cease within a 100-foot buffer of the burrow during the natal season (February–July) unless otherwise authorized by CDFG. Removal of an occupied American badger or desert kit fox burrow at anytime of the year will require coordination with CDFG.

Mitigation Measure BIO-4: Implement loggerhead shrike and other breeding bird protection measures during construction. The project applicant will ensure the following measures are implemented and included in construction specifications to avoid and minimize impacts to nesting birds.

- The construction contractor will schedule ground-disturbing activities, as well as any other work that generates elevated human activity, noise and vibration above background

operation levels, between February 1 and August 31 to avoid the breeding season between September 1 and January 31, to the greatest extent feasible.

- If nests are encountered during construction, qualified biologists will attempt to re-locate to a nearby and undisturbed location away from equipment.
- If any ground-disturbing activities, or any other work that generates elevated human activity, noise and vibration above background operation levels, will take place during the bird nesting season between February 1 and August 31, a qualified biologist will conduct pre-construction surveys for nesting birds (including raptors) 7 days before these activities are initiated. If any active nests are identified in the Project area or within 300 feet of the Project area, the following buffer(s) a 300-feet of the Project area, the following buffer (s) will be established in the field with staking and flagging:
 - 100 feet for loggerhead shrike,
 - 250 feet for burrowing owl,
 - 300 feet for raptors, and
 - 50 feet for other nesting birds.

The specified buffer size may be reduced on a case-by-case basis with CDFG approval if, based on compelling biological or ecological reasoning (e.g. the biology of the bird species, concealment of the nest site by topography, land use type, vegetation, and level of project activity) and as determined by qualified wildlife biologist, that implementation of a specified smaller buffer distance will still avoid Project-related "take" (as defined by Fish and Game Code Section 86) of adults, juveniles, chicks, or eggs associated with a particular nest.

- If other birds are present on site during Project operation, PG&E staff will continue current practices of maintaining distances from birds and avoiding nests when present.

Mitigation Measure BIO-5: Prepare and conduct a sensitive species worker awareness program. Prior to the initiation of construction activities, the qualified biologist and/or Environmental Monitor will prepare a worker awareness program to educate workers about the sensitive species that could be present in the Project area (including desert tortoise, Mohave ground squirrel, burrowing owl, and nesting birds) and the mitigation measures to protect them (Mitigation Measures BIO-1, BIO-2, and BIO-3). At a minimum, the awareness program will emphasize the following information relative to these species: (a) distribution on the job site; (b) general behavior and ecology; (c) sensitivity to human activities; (d) legal protection; (e) penalties for violating State or federal laws; (f) reporting requirements; and (g) project protective mitigation measures. PG&E and the construction contractor will ensure all workers have received the awareness program and understand the various components. Interpretation will be provided for non-English speaking construction workers.

Mitigation Measure BIO-6: Maintain a log for biological resources mitigation measures. The qualified Biologist will maintain a daily log of all biological mitigation measures implemented before, during, and after construction to protect biological resources (including Mitigation Measures BIO-1, BIO-2, BIO-3 and BIO-4).

Cultural Resources

Mitigation Measure CUL-MM-1: Stop work if cultural resources are encountered during ground-disturbing activities. The applicant will ensure the construction specifications include a stop work order if cultural resources or artifacts are discovered during construction. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or tool making debris; culturally darkened soil (“midden”) containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Paleontological resources (i.e., fossils) and human remains might include bones.

If potential cultural resources as described above are found, all work within 50 feet of the find will be stopped until qualified cultural resources staff is notified and determines and notifies appropriate qualified professional (e.g., archaeologist, architectural historian, paleontologist) and Native American representative to assess the significance of the find. If the find is determined to be potentially significant, the qualified professional(s), in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, preservation in place, capping, excavation, documentation, and curation. Any recommendations will be reviewed by PG&E and appropriate agencies.

If any human remains are discovered the County Coroner will be notified immediately according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) will be followed.

Greenhouse Gas Emissions

Mitigation Measure GHG-MM-1: Implement San Bernardino County GHG construction standards during construction. PG&E or its contractor will include as a condition of all construction contracts/subcontracts requirements to reduce GHG emissions and submitting documentation of compliance in the project completion report to the Lead Agency. PG&E or its contractor will do the following, in compliance with the San Bernardino County Greenhouse Gas Emissions Reduction Plan (December 2011).

- Select construction equipment based on low GHG emissions factors and high-energy efficiency. Where feasible, diesel-/gasoline-powered construction equipment will be replaced, with equivalent electric or compressed natural gas (CNG) equipment.
- Because it may not be feasible to use electric or CNG equipment per the County performance standard, the Project will use biodiesel fuel if the following applies:
 - Biodiesel fuel becomes available within 20 miles of the Project area.
 - The California Air Resources Board has certified that the locally available biodiesel results in reduction of GHG emissions.

- Biodiesel fuel is approved by the manufacturer for use in diesel trucks or equipment used for remedial activities, including farm equipment and construction equipment.
- The cost of biodiesel is not more than 125% above the price of regular diesel fuel, then
- As biodiesel comes in blended amounts (B5 = 5% biodiesel; B20 = 20% biodiesel; B100 = 100% biodiesel), PG&E will use the highest biodiesel blend that is approved for use in site trucks or equipment, available, and within the price limitation noted above.
- Grading contractor will implement the following when possible:
 - Training operators to use equipment more efficiently.
 - Identifying the proper size equipment for a task can also provide fuel savings and associated reductions in GHG emissions.
 - Replacing older, less fuel-efficient equipment with newer models.
 - Using global positioning system (GPS) for grading to maximize efficiency.
- Grading plans will include the following statements:
 - “All construction equipment engines will be properly tuned and maintained in accordance with the manufacturers specifications prior to arriving on site and throughout construction duration.”
 - “All construction equipment (including electric generators) will be shut off by work crews when not in use and will not idle for more than 5 minutes.”
- Recycle and reuse construction and demolition waste (e.g., soil, vegetation, concrete, lumber, metal, and cardboard) per County Solid Waste procedures.
- Educate all construction workers about the required waste reduction and the availability of recycling services.
- The project manager will ensure that the contract specifications related to GHG are followed by the contractor and will include in the project completion report to the Water Board a summary of mitigation measures implemented before, during, and after construction activities.

Noise

Mitigation Measure NOI-MM-1: Restrict construction activities to day time hours and weekdays. The construction contractor or project manager will ensure that construction activities involving the use of tractor trailers, heavy equipment, and/or pneumatic tools will be performed between 7:00 a.m. and 7:00 p.m. on Monday through Saturday, and no work at noise levels above 45db at the nearest occupied residence will be performed on Sundays or federal holidays. Additionally, this equipment will not be allowed to idle longer than 5 minutes.

Transportation and Traffic

Mitigation Measure TRA-MM-1: Implement traffic control measures during construction. To minimize impacts on local surface streets in the project area, PG&E will ensure that construction contractors implement the following traffic control measures during project construction:

- On days with large truck traffic, use personnel as necessary to direct traffic and prevent vehicles from lining up on county roads and highways during construction.
- Vehicles will not be allowed to block the roadway, resulting in an inadvertent temporary lane closure, while waiting to enter the Project area for longer than five minutes.
- Emergency vehicle access will be maintained at all times, and there will be no road closures.
- Maintain log entries whenever the above mitigation measure is implemented.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

**MONITORING AND REPORTING PROGRAM NO. R6V-2013-0003
WDID NO. 6B362031001**

**FOR
PACIFIC GAS AND ELECTRIC COMPANY
HINKLEY COMPRESSOR STATION**

San Bernardino County

I. WATER QUALITY PROTECTION STANDARD

A Water Quality Protection Standard (WQPS) is required by California Code of Regulations (CCR), title 27, section 20390 through 20410, to ensure the earliest possible detection of a release from the Surface Impoundments to the underlying soil, groundwater, and/or surface water. The WQPS shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points.

The Executive Officer shall review and approve the WQPS, or any modification thereto, for each monitored medium.

The WQPS shall:

- a. Identify all distinct bodies of groundwater that could be affected in the event of a release from the Surface Impoundments. This list shall include all groundwater bearing zones.
- b. Include a map showing the monitoring points and background monitoring points for the detection monitoring program. The map shall show the surface trace of each waste management unit's point of compliance (along the downgradient boundary of the Unit), in accordance with CCR, title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the groundwater bearing zones.

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the WQPS's concentration limits to provide season-specific concentration limits (background data sets) for each constituent of concern at each monitoring point.

1. Constituents of Concern

The Constituents of Concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Surface Impoundments. The Constituents of Concern are listed in Table 1 (Attachment A), which are made part of this MRP.

Monitoring parameters are Constituents of Concern that provide a reliable indication of a release from the Surface Impoundments. The monitoring parameters are listed in Table 1 (Attachment A).

2. Concentration Limits

For naturally occurring Constituents of Concern or non-naturally occurring Constituents of Concern whose background data set (concentration limit) exceeds its Practical Quantitation Limit (PQL), the concentration threshold for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method applied to the concentration limit (suite of background data) pursuant to CCR , title 27, section 20415; or
- b. By an alternate statistical method acceptable to the Water Board Executive Officer in accordance with CCR, title 27, section 20415.

For non-naturally occurring Constituents of Concern that do not have background values, the concentration threshold for each constituent of concern shall be taken as the PQL of the analytical method used (e.g., US-EPA Methods 8260 and 8270) in accordance with the Detection Monitoring Program. Concentration limits shall be updated by the Discharger every year and reported in the Annual Monitoring Summary Report for the respective reporting period.

3. Point of Compliance

The point of compliance for the water standard is a vertical surface located at the hydraulically downgradient limit of the Facility that extends through the groundwater bearing zones underlying the Facility.

II. MONITORING

The Discharger must comply with the Detection Monitoring Program (DMP) monitoring provisions contained in California Code of Regulations (CCR), title 27, section 20385 through 20430. The Discharger must monitor the wastewater effluent quality, Surface Impoundment wastewater, and the Surface Impoundments. All monitoring and inspecting activities must be documented. Groundwater detection monitoring wells for the surface impoundments must be installed, be operational, and have one year of quarterly monitoring data collected prior to the discharge of wastes. All samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory. In addition to satisfying the monitoring requirements of CCR, title 27, sections 20385 through 20430, the Discharger must also perform the following monitoring in accordance with the Sampling and Analysis Plan, which includes quality assurance/quality control standards:

A. Surface Impoundment Monitoring

All wastewater samples collected under this Monitoring and Reporting Program (MRP) must be analyzed to determine the concentrations of constituents listed in Table 1 (Attachment A). All samples, with the exception of field parameters, are to be analyzed by a California state-certified laboratory.

1. Wastewater Flow

The Discharger must:

- a. Collect and analyze one sample of wastewater from the point of discharge to the surface impoundments and analyze for the constituents listed and at the frequency specified in Table 1 (Attachment A).
- b. Record the maximum daily flow rate in gallons per day to the Surface Impoundments;
- c. Record the volume of flow, in gallons per day, of wastewater flow to the Surface Impoundments;
- d. Record the cumulative total of wastewater flow to the Surface Impoundments in gallons per month; and
- e. Yearly, calibrate the wastewater flow meters.

2. Wastewater

A liquid grab sample from each of the Surface Impoundments must be collected from opposite the inlet, at a depth of one foot, in a quiescent surface area. A sample must be collected for each Surface Impoundment. If the Surface Impoundment is dry, then indicate that it is dry in the monitoring report. The samples must be analyzed to determine the concentrations of constituents described and at the frequency specified in Table 1 (Attachment A).

3. Dikes and Liners

- a. Daily, each of the Surface Impoundment dikes and liners must be visually inspected to determine if there are any indications of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur, the Water Board must be notified within 24 hours, followed by confirmation in writing within 7 days.
- b. Daily, measure and record the freeboard, as measured from the top of the lowest part of the dike to the wastewater surface in each Surface Impoundment. Observations and measurements must be recorded in a permanent log book kept onsite. If the Surface Impoundment is dry, then indicate that it is dry in the log book and monitoring report.

4. Leachate Collection and Recovery Sumps

The Discharger must conduct the following inspections and testing of the Leachate Collection and Recovery Sumps (LCRS):

- a. Weekly, inspect the LCRS for the presence of liquids. The result of these inspections must be recorded in a permanent log book kept onsite.
 - i. The Discharger must record in the LCRS inspection log book the volume pumped, pumping rate, date, and discharge location of any liquid pumped from the LCRS.
 - ii. Upon detection of leachate in a previously dry LCRS that was dry during the prior week inspection (defined herein as an event), the Discharger shall immediately collect a grab sample of the leachate and shall analyze the grab samples of leachate for all of the parameters identified in Table 1 (Attachment A). Quarterly thereafter, samples of the leachate in the LCRS must be sampled and analyzed

for the constituents described and at the frequency specified in Table 1 (Attachment A).

- b. The factors set by the Water Board and used to calculate the Action Leakage Rates for the Surface Impoundments are shown in Table 1, LCRS Action Leakage Rates, below.

TABLE 1. LCRS Action Leakage Rates

Surface Impoundment	Surface Area (Acres)	Action Leakage Rate (gpd)	Rapid and Large Leakage Rate (gpd)
Pond 4	1.06	21	250
Pond 5	1.06	21	250
Pond 6R	1.22	25	250
Pond 7R	1.26	25	250
Pond 8	2.41	48	276

gpd = gallons per day

- c. If liquids are detected in the LCRS, the Discharger must respond as described in Table 2, Action and Response Levels for LCRS, below.

TABLE 2. Action and Response Levels for LCRS

Unit Flow Rate	Action/Response
Less than Action Leakage Rate	No action required. Record weekly flow rate and submit recorded flow rates with the next Quarterly Report.
Greater than or equal to the Action Leakage Rate	Notify the Water Board immediately (within 24 hours). Cease discharge to the affected surface impoundment and repair the liner.
Greater than or equal to the Rapid and Large Leakage Rate.	Notify the Water Board immediately (within 24 hours). Cease discharge to the affected surface impoundment, repair the liner, and remove the contents of the surface impoundment and LCRS. A sample must be collected and analyzed for the constituents of concern and the monitoring parameters identified in Table 1 (Attachment A).

5. Sludge Monitoring

Annually, in the last quarter of each year, collect a representative grab sample of the bottom sludge (if present) of each Surface Impoundment, and analyze each sample for the following constituents:

<u>Parameter</u>	<u>Units</u>	<u>Method</u>
Title 22 Metals	mg/L	CCR, title 22, section 66261.24 subdivision (a)(2)(A), Table II, list of inorganic persistent and bioaccumulative toxic substances and their soluble threshold limit concentrations (STLC) and total threshold limit concentration (TTLC) values.

6. Unsaturated Zone Monitoring

- a. Quarterly, the Discharger must monitor the unsaturated zone beneath the Surface Impoundments. The Discharger must check for moisture using pan lysimeters (or equivalent monitoring device) installed beneath the LCRS collection sumps.
- b. If liquid is detected in the lysimeters, field verification testing must be performed and the Discharger must notify the Water Board and report a preliminary physical evidence of a release (see notification procedures below). Verification testing must include laboratory analyses of liquids drawn from the lysimeter. Liquid quality must be compared to the wastewater monitoring parameters in the Surface Impoundment and/or the liquid collected from the LCRS, if present. The results of this comparison must be part of a release evaluation report submitted to the Water Board.
- c. Annually, the Discharger must submit documentation of unsaturated zone monitoring instrument maintenance and performance checks, including quality assurance/quality controls.

B. Operation and Maintenance

A brief summary of any operational problems and maintenance activities must be submitted to the Water Board with each monitoring report for the Hinkley Generating Station operations. This summary must discuss:

1. Any modifications, additions, or major maintenance to the wastewater conveyance system or disposal facilities.
2. Any major problems occurring in the wastewater conveyance system or disposal facilities.
3. The calibration of any wastewater flow measuring devices.

C. Detection Monitoring

Monitoring of the groundwater and unsaturated zone must be conducted in accordance with the Detection Monitoring Program (DMP) to provide the best assurance of the early detection of any new releases from the Surface Impoundments. All samples, with the exception of field parameters, must be analyzed by a California state-certified laboratory.

1. Unsaturated Zone Monitoring

The unsaturated zone beneath the surface impoundments must be monitored in accordance with Section II.A.6 of this MRP. If moisture is detected by the sensors in the lysimeters, field verification testing must be performed, and the Discharger must notify the Water Board and report physical evidence of a release (see notification procedures in Section IV.G., "Unscheduled Reports to be Filed with the Water Board").

a. Monitoring Points

The unsaturated zone monitoring program will consist of pan lysimeters located directly beneath the LCRS in each surface impoundment.

b. Monitoring Parameters and Constituents of Concern

The monitoring parameters and constituents of concern (COCs) for unsaturated zone monitoring are those listed in this MRP, Table 1 (Attachment A).

c. Concentration Limits

The concentration limits for all non-naturally occurring constituents is the method detection limit. The Discharger must, in the WQPS, establish concentration limits that define background concentrations for all monitoring parameters and constituents of concern.

d. Calibration Documentation

Annually, the Discharger must submit documentation of instrument calibration and performance checks. Performance checks must be a comparison of quarterly results of the unsaturated zone monitoring network testing with earlier tests made under comparable conditions to verify proper operation of the equipment.

2. Groundwater Monitoring

a. Monitoring Points and Point of Compliance

The Point of Compliance, as defined in CCR, title 27, section 20405, subdivision (a), is “a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit.” Groundwater monitoring wells must be installed at monitoring points upgradient of the Facility and along the Point of Compliance as part of the DMP. The groundwater monitoring program consists of a system of wells to adequately monitor groundwater beneath the Facility, per CCR, title 27, section 20415. The Discharger must collect background water quality data for the monitoring parameters and constituents of concern listed in Table 1 (Attachment A). The Discharger must collect at least eight quarters of groundwater quality data to determine background concentration limits for the monitoring parameters and COCs. The Discharger must submit a complete WQPS, which includes concentration limits that define background water quality for all COCs, and the Point of Compliance monitoring points. These data must be reported to the Water Board within 30 days following eight consecutive quarters of monitoring in the required Water Quality Protection Standard.

For any constituent that is naturally occurring at this site, its concentration threshold at a given monitoring point is the fourth standard deviation of the suite of at least eight background monitoring points collected pursuant to this subsection.

The concentration threshold for each non-naturally occurring organic constituent that is not proven to have originated from a source other than the Facility is the laboratory PQL for that constituent.

b. Monitoring Parameters and Constituents of Concern

The monitoring parameters and constituents of concern for the groundwater are those listed in this MRP, Table 1 (Attachment A). Additional groundwater samples must be collected and submitted for laboratory analyses at all monitoring points once every five years for all monitoring parameters and COCs listed in Appendix I and II of 40 CFR, Part 258.

c. Depth to Groundwater

Quarterly, prior to sampling and purging, the Discharger must measure and record the depth below the ground surface and elevation above mean sea level (msl) of the static groundwater surface in all groundwater monitoring wells. The Discharger shall use these measurements, which shall be accurate to the nearest 0.01 foot, to determine the groundwater surface map, pursuant to section II.C.2.e, "Aquifer Characteristics," below, and the groundwater flow direction, pursuant to section II.C.2.f below, each quarter.

d. Groundwater Sampling and Purging

Quarterly, the Discharger must collect samples from each groundwater monitoring well. The wells must be purged of at least three well volumes until temperature, electrical conductivity, and pH of extracted well water have stabilized to within +/- five (5) percent. Samples must be collected and analyzed using U.S. EPA methods. The samples must be analyzed to determine the concentrations of parameters described in Table 1 (Attachment A). Groundwater must also be measured for:

- i. Electrical conductivity in micromhos per centimeter (umhos/cm),
- ii. pH (in pH units),
- iii. Temperature (in either degrees Fahrenheit or degrees Centigrade), and
- iv. Turbidity (in nephelometric turbidity units [NTUs]).

e. Aquifer Characteristics

Quarterly, the most recent groundwater surface contours must be illustrated on an 8.5" x 11" or an 11" x 17" copy of a Facility plan, showing the locations of the Surface Impoundments and monitoring wells, as well as the parameters listed below in the Table – Aquifer Characteristics.

Table – Aquifer Characteristics

Parameter	Units
Depth to Groundwater	Feet below ground surface
Static Water Level	Feet above mean sea level
Slope of Groundwater Gradient	Feet/Feet
Direction of Groundwater Flow	Degrees from true North
Velocity of Groundwater Flow	Feet/Year

- f. Quarterly, the Discharger must calculate, record, and report the groundwater gradient, the direction of the gradient, and the velocity of groundwater flow.
- g. Quarterly, the Discharger must graph time-series plots of the analytical results from the groundwater monitoring at each monitoring point to show any trends in constituent concentrations through time. Time-series plots must also include, as horizontal lines, the constituents' maximum contaminant level (MCL) (if an MCL has been established), and the concentration threshold derived from the constituent's background data set (concentration limit) at that monitoring point.
- h. Annually, water quality in monitoring wells utilized for groundwater monitoring of the Facility must be reported in the annual report in tabular and graphical form. Each table must summarize the historical and most recently detected constituent concentrations for all wells sampled, and compare these data to both the applicable concentration threshold and the Maximum Contaminant Level (MCL) established for each monitoring parameter/constituent of concern. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing the trends of similar constituents (e.g., volatile organic compounds), the scale must be the same.

III. DATA ANALYSES

All data analyses methods (statistical and non-statistical) must meet the requirements of the California Code of Regulations, title 27, sections 20415, subdivisions (e)(8) and (9).

A. Statistical Data Analysis Method

In order to determine if any new releases have occurred from the Facility, evaluation of data will be conducted using statistical methods. For Detection Monitoring, the Discharger shall use statistical methods to analyze COCs and monitoring parameters that exhibit concentrations that

equal or exceed their respective method detection limit in at least ten percent of applicable historical samples. The Discharger may propose and use any data analyses that meets the requirements of California Code of Regulations, title 27, section 20415, subdivision (e)(7). The report titled "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance" (USEPA, 2009) or subsequent versions may also be used to select the statistical test to use for comparing detection monitoring data to background monitoring data.

The Discharger has been utilizing Shewhart-CUSUM Control Chart methods for the groundwater monitoring wells used to monitor the existing surface impoundments, Ponds 4, 5, and 8. The Discharger must incorporate existing groundwater monitoring wells into the monitoring network for the purposes of monitoring the new surface impoundments, Ponds 6R and 7R, and will incorporate the data from the additional wells into the existing Shewhart-CUSUM Control Chart system.

B. General Non-Statistical Data Analysis Method

In order to determine if any new releases have occurred from the Facility, evaluation of data will also be conducted using non-statistical methods. Non-statistical analyses shall be as follows:

1. Physical Evidence

Physical evidence can include unexplained stress in biological communities such as vegetation loss, soil discoloration, or groundwater mounding. Each quarterly report must comment on such physical elements.

2. Time-Series Plots

Quarterly, the Discharger shall graph time-series plots of the historical and most recent analytical results from unsaturated zone and groundwater monitoring to show trends in constituent concentrations through time. Time-series plots must include the applicable MCL and both the mean and median of the WQPS for each respective constituent, or monitoring parameter. Time series plots are not required for parameters that have never been detected above their method detection limit (as specified by the applicable USEPA method) or if there are less than four quarters of data. Evidence of a release may include trends of increasing concentrations of one or more constituents over time.

IV. REPORTING REQUIREMENTS

The Discharger must comply with the following reporting requirements:

A. General Provisions

The Discharger must comply with Attachment B, "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made a part of this MRP.

B. Failure to Furnish Reports

Any person failing or refusing to furnish technical or monitoring reports or falsifying any information provided therein is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation pursuant to California Water Code, section 13268.

C. Violations

If monitoring data indicate violation of WDRs, the Discharger must identify the violation and provide information indicating the cause of violation(s) and action taken or planned to bring the discharge into compliance.

D. Monitoring Reports

Quarterly, monitoring data must be submitted electronically to the Water Board and uploaded to the State Water Board's Geotracker system, no later than the **30th day of the month following each quarter**, per the following schedule:

<u>Sampling and Reporting Frequency</u>	<u>Quarterly Period</u>	<u>Report Date Due</u>
Quarterly	January 1 – March 31	April 30
Quarterly	April 1 – June 30	July 30
Quarterly	July 1 – September 30	October 30
Quarterly	October 1 – December 31	January 30

Semi-annually, monitoring reports, including the preceding information, must be submitted to the Water Board on the **30th day of the month following each quarter**, per the following schedule:

<u>Sampling and Reporting Frequency</u>	<u>Quarterly Period</u>	<u>Report Date Due</u>
Semi-Annual	January 1 – June 30	July 30
Semi-Annual	July 1 – December 31	January 30

Each semi-annual report must include the following:

1. Results of sampling and laboratory analyses for each groundwater monitoring point, including statistical limits for each monitoring parameter and an identification of each sample that exceeds its respective statistical limit at any given monitoring point;
2. A description and graphical presentation of the velocity and direction of groundwater flow under/around the Facility, based upon water-level elevations taken during the collection of the water quality data submitted in the report;
3. A map and/or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points, and the Point of Compliance along the downgradient boundary of the Facility;
4. Surface Impoundments monitoring, flow monitoring, effluent monitoring, and an evaluation of the effectiveness of the leachate monitoring and control facilities;
5. Data collected in accordance with the approved Monitoring and Reporting Plan and Sampling and Analysis Plan for the Surface Impoundments' unsaturated zone monitoring system and groundwater monitoring wells;
6. A letter transmitting the essential points of each report, including a discussion of any violations found since the last report was submitted and describing actions taken or planned for correcting those violations; and,
7. If the Discharger has previously submitted a detailed time schedule for correcting violations, a reference to the correspondence transmitting this schedule will be satisfactory. If no violations have occurred since the last submittal, this must be stated in the letter of transmittal.
8. Quarterly data must be submitted electronically to GeoTracker. Semi-annually, hard copies of the reports must be submitted to the Water Board.

E. Annual Monitoring Reports

Annual Monitoring Reports must be submitted to the Water Board no later than **April 30** of each year. The annual report can be combined with the monitoring report for the last reporting period of that year. The reports must include the items described in the General Provisions for Monitoring and Reporting (Attachment B), the information under Section IV.D., and the following information:

1. A list of all monitoring point/monitoring parameter (MPt/MPar) pairs, by medium, that have exhibited a verified measurably significant increase, together with the respective date (for each) when that increase occurred. Any MPt/MPar pairs that have shown an increase within that (prior) year shall be bolded-and-underlined. In addition, by medium, list any non-monitoring parameter COCs that, during testing that year (tested every five years), have exceeded their respective statistical limit and, as a result, have become monitoring parameters, together with the date when the transition occurred;
2. Time-series data plots of groundwater and unsaturated zone analysis. Time-series plots must also include appropriate MCL or concentration threshold established for each respective constituent that has not shown a verified release. For a pair that has a verified release indication, these plots must also include the cleanup goal;
3. Four maps, one for each quarter of the last reporting year, showing the groundwater elevation isocontours determined for that quarter, and showing the Surface Impoundments perimeters and the groundwater monitoring point and background monitoring point locations for each waste management unit, and including the surface trace of the Facility's point of compliance;
4. Graphical and tabular data for the monitoring data obtained for the previous calendar year (January – December). Each table must summarize the historical and most recently detected constituents concentrations for all locations sampled, and compare these data to both the given monitoring point/COC pair's respective statistical concentration limit and (if applicable) MCL, and be labeled appropriately. Each such graph must be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing trends of similar constituents (e.g., volatile organic compounds), the scale must be the same;
5. Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed;

6. The compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the discharge requirements;
7. Evidence that adequate financial assurance for closure and corrective action for all known or reasonably foreseeable releases is still in effect. Evidence may include a copy of the renewed financial instrument or a copy of the receipt for payment of the financial instrument. Evidence of adequate financial assurance must be signed by the Corporate Officer;
8. Evidence that the financial assurance amount is adequate or increase the amount of financial assurance by an appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events; and,
9. The Discharger must review the preliminary closure plan and corrective action plan for all known or reasonably foreseeable releases annually to determine if significant changes in the operation of the Facility warrant an update to any of these plans. Changes to these plans must be submitted to the Water Board in the annual report.

F. Five-Year Non-Monitoring Parameter Constituent of Concern Monitoring Program

Pursuant to CCR, title 27, section 20420, subdivision (g), every five years the Discharger must sample for non-monitoring parameter COCs. Groundwater samples must be collected and submitted for laboratory analyses at all monitoring points once every five years for all monitoring parameters and COCs listed in Appendix I and II of 40 CFR, Part 258. Successive monitoring efforts must be carried out alternatively during January 1 through June 30 of one five-year sampling event and July 1 through December 31 of the next five-year sampling event, and every fifth year, thereafter. The five-year non-monitoring parameter COC sampling event must be reported no later than 45 days following the monitoring period.

G. Unscheduled Reports to be Filed With the Water Board

The following reports must be submitted to the Water Board as specified below:

1. Release from the Surface Impoundments

The Discharger must perform the procedures contained in this subsection whenever there is evidence of a release from the Facility.

a. Physical or Measurably Significant Evidence of a Release from the Surface Impoundments

The Discharger must immediately notify the Water Board verbally whenever a determination is made that there is physical or “measurably significant” evidence of a release from the Surface Impoundments. This verbal notification must be followed by written notification via certified mail within seven days of such determination. Upon such notification, the Discharger may initiate verification procedures or demonstrate that another source other than the Surface Impoundments caused evidence of a release (see below).

The notification must include the following information:

- i. Surface Impoundment(s) that may be the source of the release;
- ii. General information including the date, time, location, and cause of the release;
- iii. An estimate of the flow rate and volume of waste involved;
- iv. A procedure for collecting samples and description of laboratory tests to be conducted;
- v. Identification of any water body or water-bearing media affected or threatened;
- vi. A summary of proposed actions; and,
- vii. For a measurably significant evidence of a release – the monitoring parameters and/or COCs that are

involved in the measurably significant evidence of a release from the Surface Impoundment(s); or

- viii. For a physical evidence of a release – physical factors that indicate evidence of a release.

b. Other Source That May Cause Evidence of a Release From the Surface Impoundments

The Discharger may make a demonstration that a source other than the Surface Impoundments caused evidence of a release. For this case, the Discharger must notify the Water Board of the intention to make this demonstration. The notification must be sent to the Water Board by certified mail within seven days of determining physical or measurably significant evidence of a release.

2. Exceeding the Leakage Rate

Exceeding the Action Leakage Rate is an Adverse Condition. The Discharger must immediately notify the Water Board verbally within 24 hours whenever a determination is made that leakage into the LCRS exceeds the Action Leakage Rate. This verbal notification must be followed by written notification via certified mail within 7 days of such determination. This written notification must be followed by a technical report via certified mail within 30 days of such determination. The technical report must describe the actions taken to abate the Adverse Condition and must describe any proposed future actions to abate the Adverse Condition.

Exceeding the Rapid and Large Leakage Rate is also an Adverse Condition. In addition to the requirements above for exceeding the Action Leakage Rate, the technical report must include sampling results and a comparison of the wastewater in the surface impoundment and the leachate in the LCRS, as described in Table 2 of this MRP.

3. Evaluation Monitoring

The Discharger must, within 90 days of verifying a “measurably significant” release, submit a technical report pursuant to California Water Code section 13267, subdivision (b), proposing an Evaluation Monitoring Program (EMP). If the Discharger decides not to conduct verification procedures, or decides not to make a demonstration that a source other than the surface impoundment is responsible for the release, the release will be considered verified.

The Discharger must, within 90 days of determining a “measurably significant” evidence of a release, submit to the Water Board an amended report of waste discharge to establish an evaluation monitoring program meeting the provisions of CCR, title 27, section 20420, subdivision (k)(5). The report must include the following information:

- a. COC Concentrations – the maximum concentration of each COC at each Monitoring Point as determined during the most recent COC sampling event (i.e., under CCR, title 27, section 20420, subdivision (g) or (k)[1]). Any COC that exceeds its background limit is to be retested at that monitoring point. Should the results of the retest verify that the COC is above the background limit, then that COC will become a monitoring parameter at all monitoring points;
- b. Proposed Monitoring System Changes – any proposed changes to the water quality monitoring systems at the Surface Impoundments necessary to meet the provisions of CCR, title 27, section 20425;
- c. Proposed Monitoring Changes – any proposed additions or changes to the monitoring frequency, sampling and analytical procedures or methods, or statistical methods used at the Facility necessary to meet the provisions of CCR, title 27, section 20425; and,
- d. Proposed Delineation Approach – a detailed description of the measures to be taken by the Discharger to assess the nature and extent of the release from the Surface Impoundments.

4. Engineering Feasibility Study Report

Within 180 days of verifying the existence of a release, the Discharger must submit an Initial Engineering Feasibility Study report meeting CCR, title 27, section 20420, subdivision (k)(6), proposing corrective action measures that could be taken to achieve background concentrations for all constituents of concern involved in the release. This report will be the basis for a later expanded Engineering Feasibility Study, submitted under the Evaluation Monitoring Program, per CCR, title 27, section 20425, subdivision (b).

H. Water Quality Protection Standard

No later than 760 days following beginning of operations, pursuant to California Water Code, section 13267, subdivision (b), the Discharger must submit for acceptance by the Water Board a proposed data analysis method and a proposed concentration limit (background data set) consisting of at least eight data points from an appropriate groundwater background data source for each COC at each monitoring point. The report must be certified by a registered civil engineer or a registered professional geologist.

Ordered by:


PATTY Z. KOUYOUMDJIAN

Dated: January 16, 2013

EXECUTIVE OFFICER

- Attachments:
- A. Table 1, Surface Impoundment Monitoring Parameters and Constituents of Concern
 - B. General Provisions for Monitoring and Reporting, September 1, 1994

Table 1
Monitoring Parameters and Constituents of Concern

Parameter	Units	Monitoring and Reporting Frequency
Constituents of Concern		
Boron	mg/L	Quarterly
Chloride	mg/L	Quarterly
Fluoride	mg/L	Quarterly
Nitrate	mg/L	Quarterly
Sodium	mg/L	Quarterly
Sulfate	mg/L	Quarterly
Total Dissolved Solids (TDS)	mg/L	Quarterly
Monitoring Parameters		
Arsenic	mg/L	Annually
Barium	mg/L	Annually
Cadmium	mg/L	Annually
Calcium	mg/L	Annually
Carbonate	mg/L	Annually
Chloride	mg/L	Annually
Chromium, Total	mg/L	Annually
Copper	mg/L	Annually
Hexavalent Chromium	mg/L	Annually
Iron	mg/L	Annually
Lead	mg/L	Annually
Magnesium	mg/L	Annually
Manganese	mg/L	Annually
Molybdenum	mg/L	Annually
Nickel	mg/L	Annually
Oil and Grease	mg/L	Annually
Potassium	mg/L	Annually
VOCs	ug/L	Annually
Zinc	ug/L	Annually

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. **SAMPLING AND ANALYSIS**

- a. All analyses shall be performed in accordance with the current edition(s) of the following documents:
 - i. Standard Methods for the Examination of Water and Wastewater
 - ii. Methods for Chemical Analysis of Water and Wastes, EPA
- b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.
- c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.
- d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.
- e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.
- f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.
- g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

- a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.
- b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.
- d. Monitoring reports shall be signed by:
 - i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;
 - ii. In the case of a partnership, by a general partner;
 - iii. In the case of a sole proprietorship, by the proprietor; or

- iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.
- e. Monitoring reports are to include the following:
 - i. Name and telephone number of individual who can answer questions about the report.
 - ii. The Monitoring and Reporting Program Number.
 - iii. WDID Number.
- f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1,000) for each day of violation under Section 13268 of the Water Code.

x:PROVISIONS WDRS

file: general pro mrp