

EnviroTech
Consultants, Inc.

5400 Rosedale Highway
Bakersfield, CA 93308

**DRILLING AND PRODUCTION COMPANY
RESPONSE TO RWQCB SECTION 13267 ORDER
POND INFORMATION AND SAMPLING RESULTS**

**MIDWAY SUNSET OIL FIELD
SNOOK & WELLS LEASE
SECTION 12 T11N/R24W MDB&M**

June 10, 2015

Prepared by:

EnviroTech Consultants, Inc.

M. Jane Ellis-McNaboe
M. Jane Ellis-McNaboe, PG





DRILLING & PRODUCTION CO.

2323 Border Avenue, Torrance, California 90501
P.O. Box 4120, Torrance, California 90510

Tele: 310/328-2405
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June 10, 2015

Certification Statement
RWQCB Order 13267, Pond Sampling Technical Report
Drilling and Production Company, Snook and Wells Lease

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

James Hall

Date

6/10/2015

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ATTACHMENT B	Copy of RWQCB Order 13267, 1 April, 2015
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1.0 IDENTIFICATION OF DISCHARGES OF PRODUCED WATER TO LAND

Four ponds were identified by the Regional Water Quality Control Board (RWQCB) containing discharges of produced water. Drilling & Production Co. and its predecessor (E.B. Hall & Company) have been operating the ponds (or an equivalent) since it acquired the property in about 1957. The ponds are permitted by Waste Discharge Requirements (WDR) Resolution No. 59-7 through 59-73.

A map of the ponds and surrounding lease is included as Attachment A.

2.0 POND SAMPLING

Representative samples of wastewater were collected by EnviroTech Consultants, Inc. (EnviroTech) on May 12, 2015 as required by Order 13267 dated April 1, 2015 (Attachment B). The four ponds are in series so only one fluid sample was required. The samples were collected from a sampling port on the pipeline that leads from the settling tank to the first pond. Fluid samples were decanted into appropriate sampling containers and cooled with ice for storage and transportation under standard chain of custody procedures.

3.0 POND SAMPLING ANALYTICAL RESULTS

The samples were received by Test America Laboratories, Inc. on May 12, 2015. EnviroTech received the laboratory analytical report on June 11, 2015. The analytical results are summarized in the following tables; complete laboratory reports are included in Attachment C.

Table 3-1: General Chemistry

Sample ID	Date Sampled	Total Dissolved Solids	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Strontium	Alkalinity as CaCO ₃	Bicarbonate ion as HCO ₃	Carbonate as CO ₃	Hydroxide as OH
EPA Analytical Method		2540C_Calcd	6010B						2320B				
Units		mg/L											
Reporting limit		Reporting limits vary, see full analytical report.											
Snook & Wells	5/12/2015	Results											
		12,000	89	4.2	150	<0.2	66	4,000	9.5	<4.0	<4.8	<2.4	<1.4

Bold = Analyte detected at or above minimum reporting limit.

Table 3-2: Anions

Sample ID	Date Sampled	Anions, Ion Chromatography			
		Bromide	Chloride	Nitrate as NO3	Sulfate
EPA Analytical Method		300_ORGFM_28D		300_ORGFMS	300_ORGFM_28D
Units		mg/L			
Reporting Limit		Reporting limit varies, see full analytical report.			
Snook & Wells	5/12/2015	87	4,500	<25	<25

Bold = Analyte detected at or above minimum reporting limit.

Table 3-3: Metals

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead
EPA Analytical Method		6010B									
Units		mg/L									
Reporting Limit		Reporting limit varies by sample. See full analytical report.									
Snook & Wells	5/12/2015	<0.01	<0.01	4.3	<0.002	57	<0.005	0.0074	<0.01	0.011	<0.005

Sample ID	Date Sampled	Lithium	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Vanadium	Zinc	Mercury
EPA Analytical Method		6010B									7470A
Units		mg/L									
Reporting Limit		Reporting limit varies by sample. See full analytical report.									
Snook & Wells	5/12/2015	1.5	<0.02	<0.01	<0.01	<0.01	9.5	<0.01	<0.01	<0.02	<0.0002

Bold = Analyte detected at or above minimum reporting limit.

Table 3-4: BTEX and TPH

Sample ID	Date Sampled	Benzene	Ethylbenzene	Toluene	Xylenes, Total	TPH as Crude Oil: Diesel and Gasoline Range Organics (GC)		
						C4-C12	C13-C22	C23-C40
EPA Analytical Method		8260B			8015B_GRO	8015B_DRO		
Units		ug/L			ug/L	mg/L		
Reporting Limit		Varies, see laboratory report				2.5		
Snook & Wells	5/12/2015	30	33	13	6.8	21,000	12	6.7
Travel Blank	5/12/2015	<2.0	<2.0	<2.0	<2.0	NA	NA	NA

Bold = Analyte detected at or above minimum reporting limit.
 NA – not analyzed for this compound.

Table 3-5: Semi-volatile Organic Compounds

Sample ID	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene
EPA Analytical Method		8270C_SIM															
Units		ug/L															
Snook & Wells	5/21/2015	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	7.8	4.2	<1.9

Bold = Analyte detected at or above minimum reporting limit.
 Reporting limit varies by sample. See complete analytical report.

Table 3-6: Radionuclides

Sample ID	Date Sampled	Gross Alpha	Gross Beta	Radium-226	Radium-228	Uranium
EPA Analytical Method		9310		9315_Ra226	9320_Ra228	6020A
Units		pCi/L				
Regulatory Threshold*		15		--	5	20
Snook & Wells	5/12/2015	28.6±56.6	32.6±22.0	1.90±0.338	1.26±0.46	<6.7

Bold = Analyte detected at or above minimum reporting limit.

Reporting limit varies by sample; see complete laboratory report.

* Title 22, Table 6443. MCL. – No Regulatory Threshold

Results expressed as Total Uncertainty (2σ+/-)

4.0 INFORMATION FOR EACH SURFACE IMPOUNDMENT

The following table contains the required information for the Drilling and Production Company, Snook & Wells ponds. The ponds are in series.

Table 4-1: Surface Impoundment Information

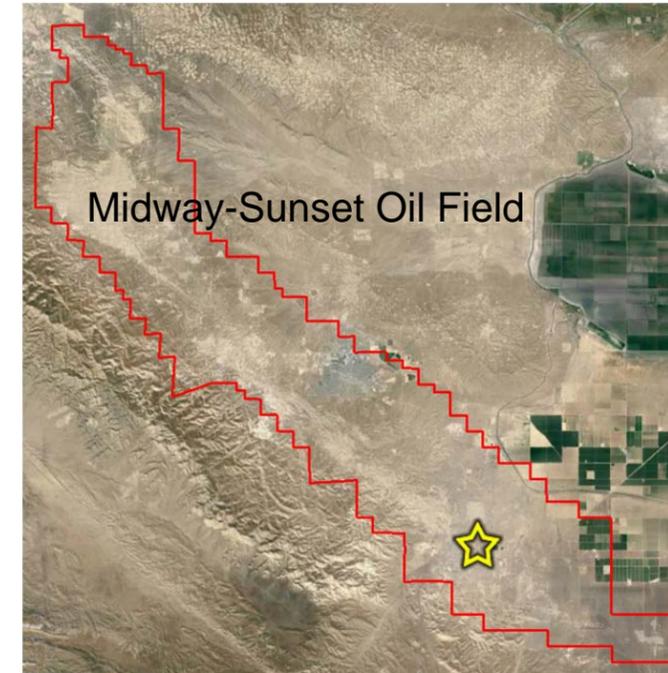
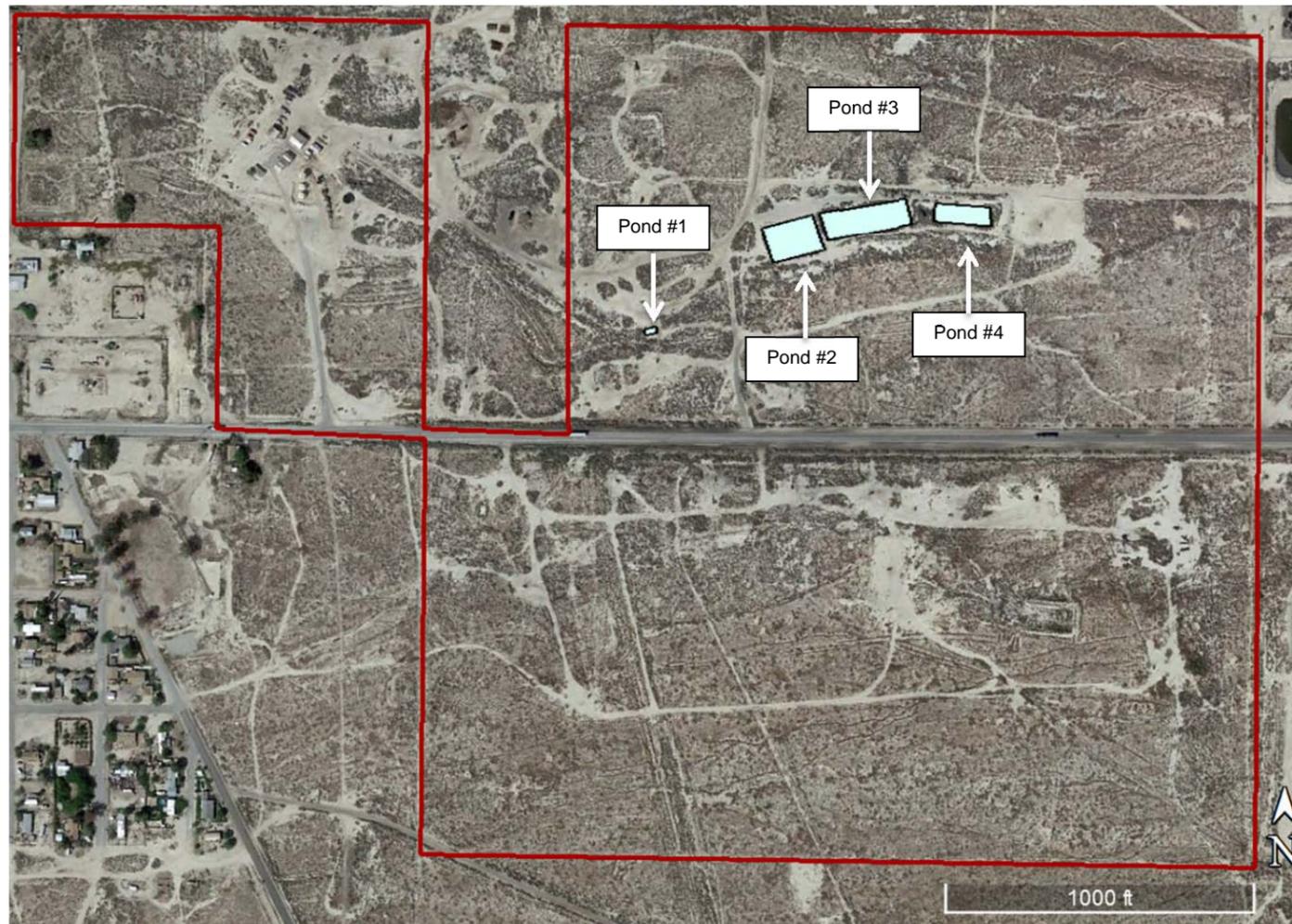
Pond Identification	Surface Impoundment Dimensions (feet)			Location (NAD 83)	Assessor's Parcel Number of the lease	Duration of discharge (months /year)	Volume of wastewater discharged per year (barrels)
	Length	Width	Depth				
Pond #1	Length	Width	Depth	Latitude:35.05927°	239-192-42	12	589,395
	36'	20'	10'	Longitude:-119.39075°			
Pond #2	Length	Width	Depth	Latitude:35.06007°	239-192-42	12	
	150'	100'	8'	Longitude:-119.38922°			
Pond #3	Length	Width	Depth	Latitude:35.06026°	239-192-42	12	
	85'	305'	10'	Longitude:-119.38844°			
Pond #4	Length	Width	Depth	Latitude:35.06029°	239-192-42	12	
	250'	75'	12'	Longitude:-119.38744°			

ATTACHMENT A

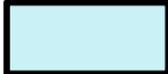
DRILLING AND PRODUCTION COMPANY

SNOOK & WELLS PONDS MAP

Drilling and Production Company



Legend

	Lease		
	Lease Ponds		
		Pond #1 Length – 36' Width – 20' Depth – 10'	Pond #2: Length – 150' Width – 100' Depth – 8'
		Pond #3: Length-85' Width-305' Depth-10'	Pond #4: Length-250' Width-75' Depth-12'

Prepared By:	TITLE:	Snook and Wells Lease Ponds
	FIELD:	Midway-Sunset Oil Field
	COUNTY:	Kern
Section/Township/Range	DRN BY:	Kelsey Padilla
T11N/R24W – Section 12 MDB&M (NE ¼ and NE ¼ of the NW ¼)	DATE:	May 28, 2015

ATTACHMENT B

DRILLING AND PRODUCTION COMPANY
COPY OF RWQCB ORDER 13267, 1 APRIL, 2015



RECEIVED
APR 08 2015



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

1 April 2015

J. C. Hall
Drilling & Production Co.
P.O. Box 4120
Torrance, CA 90501

CERTIFIED MAIL
7014 3490 0001 7023 0261

CALIFORNIA WATER CODE DIRECTIVE PURSUANT TO SECTION 13267. You are legally obligated to respond to this Order. Please read this Order carefully.

Drilling & Production Co. (hereafter Discharger) has been identified as the owner or operator of petroleum production wastewater disposal ponds (ponds). A list of the ponds (and the leases and oil fields where they are located) that the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) identifies as under your control is presented in Attachment A. Ponds for the disposal of wastewater generated during the course of petroleum production have the potential to affect the quality of groundwater (a water of the State). Groundwater underlying the areas where your ponds are located have beneficial uses as identified in the Water Quality Control Plan for the Tulare Lake Basin (Basin Plan).

This order requires the collection and analysis of wastewater samples collected from each of the ponds listed in Attachment A to characterize the discharge. Each sample is to be analyzed for each of the constituents listed in Attachment B. These data are needed to comprehensively characterize wastewater in each pond and provide data needed to evaluate the threat to the quality of waters of the State. If more than one pond is connected in series (i.e., one pond drains directly to the next with no other source of inflow) then only the upstream pond must be sampled. This order is not intended to require the collection of duplicative data. If during the 12 months (one year) prior to the date of this order, samples required by this order have been analyzed from one or more of the ponds for the required constituents, that data can be submitted for the appropriate order requirements.

This order also requires Discharger to identify any discharge(s) of oil field wastewater to land that is not identified in Attachment A. Discharger must also collect and analyze wastewater samples in accordance with Attachment B from any additionally identified discharge to characterize the discharge.

The Central Valley Water Board's authority to require technical reports derives from Section 13267 of the California Water Code, which specifies, in part, that:

(z) A regional Board ... in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the State within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefit to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The Central Valley Water Board is concerned about the potential impacts to water quality posed by the discharge of oil field produced waters in surface ponds. The technical information and reports required by this order are necessary to assess the potential threat to water quality. The need to understand the potential impacts to water quality justify the need for the information and reports required by this order. Based on the nature and possible consequences of the discharges of waste, the burden of providing the required information, including the reporting costs, bears a reasonable relationship to the need for the report, and the benefits to be obtained. Discharger is required to submit this information and reports because it is the operator of the ponds listed in Attachment A of this order.

The unauthorized discharge of waste containing oil field waste constituents to land, including unlined ponds, may result in the degradation of water quality and creates or threatens to create, a condition of pollution in groundwater. Significant concentrations of salinity (measured as TDS and EC), significant contributors to salinity such as chloride and sulfate, and boron are present in oil field wastewater. Other potential constituents such as, but not limited to, metals, radionuclides, and organic compounds pose a threat to water quality. The concentrations of these waste constituents in wastewater being discharged needs to be known to evaluate the threat. In addition, all locations where these discharges are occurring needs to be known.

Underlying groundwater can be degraded if mixed with oil field wastewater. Elevated concentrations of oil field waste constituents could impair the groundwater for municipal and domestic supply and agricultural supply uses.

Under the prescribed authority of California Water Code section 13267, the Central Valley Water Board directs Discharger to:

1. By 15 June 2015, submit a technical report containing the following information:

- A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;
- B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order;¹

If a representative sample cannot feasibly be collected from one or more of the sources discharging to a surface impoundment(s), then a comment will need to be added to the technical report required by this Order demonstrating that collection of a representative sample from a specific source is not feasible within the required timeframe, and propose an alternative sampling procedure and expeditious time schedule for obtaining a representative sample for each source. Alternative sampling procedures and time schedules are subject to approval by the Assistant Executive Officer of the Central Valley Regional Water Quality Control Board.

- C. All available information for each of the surface impoundment(s), including dimensions (i.e., length, width, and depth), latitude and longitude, Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.
- D. A location map that includes the following information:
 - i. All surface impoundment(s) at the Facility,
 - ii. Include the boundary lines for all leases at the Facility, and
 - iii. Legend with the name of the surface impoundment(s).

2. By 15 April 2015, Discharger needs to contact Dane S. Johnson of this office at (559) 445-5525 if you have received this Order and cannot collect the required samples.

¹ All previously obtained analytical data for oil field produced wastewater samples collected at the Facility, if any, with a description of the source and location for each analysis may be submitted in the alternative for re-running tests if the sample(s) was collected and analyzed within 12 months (one year) of the date of this order.

The technical report required by this Order must be submitted to the attention of:

Ronald Holcomb
Central Valley Water Board
1685 E Street
Fresno, CA 93706

Based on the information submitted in the technical report, additional information or action may be required.

With the report required by this Order, Discharger shall provide under penalty of perjury under the laws of California a "Certification" statement to the Central Valley Water Board. The "Certification" shall include the following signed statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

The Central Valley Water Board reserves the right to issue a Notice of Violation or pursue enforcement for Discharger's activities after reviewing the documentation provided in response to this Order.

The Technical Report is to be signed and stamped by a California Professional Engineer (Registered as a Civil Engineer) or a registered California Professional Geologist. Any laboratory analyses shall be performed by an analytical laboratory certified by the State of California for the analyses performed. Submissions pursuant to this Order shall include a statement by Discharger, or an authorized representative of Discharger, certifying (as described above) that the information submitted is true, complete, and accurate.

The failure to furnish the required report, or the submission of a substantially incomplete report or false information, is a misdemeanor, and may result in additional enforcement actions being taken against Discharger, including issuance of an Administrative Civil Liability Complaint pursuant to California Water Code section 13268. Liability may be imposed pursuant to California Water Code section 13268 in an amount not to exceed one thousand dollars (\$1,000) for each day in which the violation occurs. All discharges to unpermitted ponds should cease pending review and submission of the technical information sought by this order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with

California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days after the date of this directive, except that if the thirtieth day following the date of this directive 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: www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

If you have any questions regarding this matter, please contact Doug Patteson of this office at (559) 445-5577 or at doug.patteson@waterboards.ca.gov.



Clay L. Rodgers
Assistant Executive Officer

cc: Julie Macedo, Office of Enforcement, State Water Resources Control Board, Sacramento
Mike Toland, California Division of Oil, Gas, and Geothermal Resources, Bakersfield

ATTACHMENT A

The following table contains the names of oil fields and lease(s) and the corresponding number of ponds that the Central Valley Water Board has identified as active and under your control:

OPERATOR	OIL FIELD	LEASE	NO. OF PONDS
Drilling & Production Co.	Midway-Sunset	SW	4

ATTACHMENT B**Water Quality Analysis**

Wastewater samples collected from the ponds shall be analyzed by a laboratory certified by the Environmental Laboratory Accreditation Program using currently applicable United States Environmental Protection Agency-approved analytical methods for water for the following:

- A. Total dissolved solids;
- B. Metals listed in California Code of Regulations, title 22, section 66261.24. subdivision (a)(2)(A);
- C. Benzene, toluene, ethylbenzene, and xylenes;
- D. Total petroleum hydrocarbons as crude oil;
- E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorine, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene);
- F. Radionuclides listed under California Code of Regulations, title 22, Table 64442;
- G. Major and minor cations (including sodium, potassium, magnesium, and calcium);
- H. Major and minor anions (including nitrate, chloride, sulfate, carbonate, bicarbonate, and bromide);
- I. Trace elements (including lithium, strontium, boron, iron, and manganese).

Reporting Requirements

~~Water Quality information shall be submitted in a technical report that includes at a minimum:~~

- A. Site plan(s) with the location(s) of where the samples were collected;
- B. A description of how the samples, representative of the pond contents, were collected;

Table(s) of analytical results organized by pond number with the data also submitted electronically as an Excel spreadsheet.

ATTACHMENT C

DRILLING AND PRODUCTION COMPANY
LABORATORY ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-109586-1

TestAmerica SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Client Project/Site: RWQCB Pond Testing, 2015

Revision: 1

For:

Envirotech Consultants, Inc.

5400 Rosedale Highway

Bakersfield, California 93308

Attn: Jane McNaboe



Authorized for release by:

6/11/2015 3:38:56 PM

Janice Hsu, Project Manager I

(949)261-1022

janice.hsu@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-109586-1	Snook and Wells	Water	05/12/15 11:40	05/12/15 18:40
440-109586-2	Travel Blank	Water	05/12/15 00:01	05/12/15 18:40

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Case Narrative

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Job ID: 440-109586-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative 440-109586-1

Comments

Per client, the sampling date should be 05/12/15 COC is incorrect.

Receipt

The samples were received on 5/12/2015 8:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

GC/MS VOA

Method(s) 8260B: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH=7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Snook and Wells (440-109586-1).

Method(s) 8260B: The following volatile samples were received and analyzed with significant headspace in the sample vial: Snook and Wells (440-109586-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270C SIM: The following samples required a dilution due to the nature of the sample matrix: Snook and Wells (440-109586-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C SIM: The internal standard response was below the 50% minimum QC limit for the following samples: Snook and Wells (440-109586-1). The chromatography showed some matrix interference that could have adversely affected the recovery of the affected internal standard. All affected target analytes were flagged with an asterisk (*). If the matrix effect is isolated to the internal standards, then the affect on the associated target analyte results are potentially biased high.

Method(s) 8270C SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-255077 and analytical batch 440-255456. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8270C SIM: The following samples was diluted due to the abundance of non-target analytes: Snook and Wells (440-109586-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC

Method(s) 300.0: The following samples was diluted for Sulfate due to the nature of the sample matrix: Snook and Wells (440-109586-1). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for batch 254372 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: The following samples was diluted for Nitrate due to the nature of the sample matrix: Snook and Wells (440-109586-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA

Case Narrative

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Job ID: 440-109586-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Method(s) 8015B: The following samples required a dilution due to the nature of the sample matrix: Snook and Wells (440-109586-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6010B: The continuing calibration verification (CCV) associated with batch 255627 recovered above the upper control limit for Arsenic and Molybdenum. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Snook and Wells (440-109586-1).

Method(s) 6010B: The following samples was diluted due to the nature of the sample matrix: Snook and Wells (440-109586-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Narrative

Job Narrative 440-109586-2

Comments

No additional comments.

Receipt

The samples were received on 5/12/2015 8:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3° C.

RAD

Method(s) 9310: Gross alpha/beta Batch: 191213

The gross alpha and gross beta detection goals were not met for the following samples due to a reduction of the sample size which can be attributed to high residual mass: Snook and Wells (440-109586-1), (160-11837-D-1-A) and (160-11837-D-1-B DU). Analytical results are reported with the detection limit achieved.

Method(s) 9315: Radium 226 Prep Batch 190808:

The barium recovery is above the 110% QC limit for the laboratory control sample (LCS- 120%) associated with 160-190808. The LCS/LCSD spike recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation, isolated to the LCS, which is not indicative of the entire batch. The samples have been truncated to 100% in order to minimize any potential bias a high carrier recovery may have on the results: Snook and Wells (440-109586-1), (LCS 160-190808/2-A), (LCSD 160-190808/3-A) and (MB 160-190808/1-A).

Method(s) 9320: Radium 228 Prep Batch 190809:

The barium recovery is above the 110% QC limit for the laboratory control sample (LCS- 120%) associated with 160-190809. The LCS/LCSD spike recoveries are within control limits, which demonstrates acceptable sample preparation and instrument performance. As such, this was an apparent anomaly in the sample preparation, isolated to the LCS, which is not indicative of the entire batch. The samples have been truncated to 100% in order to minimize any potential bias a high carrier recovery may have on the results: Snook and Wells (440-109586-1), (LCS 160-190809/2-A), (LCSD 160-190809/3-A) and (MB 160-190809/1-A).

Method(s) PrecSep_0: radium-228 batch 190809 and radium-226 batch 190808

Case Narrative

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Job ID: 440-109586-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

A deviation from the Standard Operating Procedure (SOP) occurred. The following sample were oily and had a strong odor: Snook and Wells (440-109586-1) . A 500 mL aliquot was taken to dryness, muffled, and underwent acid digestion. After digestion the process continued per the SOP. Due to the matrix of the sample, a LCS/LCSD was performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 3010A: Prep 192621

Due to their oleaginous nature, dilutions were performed for the following samples: Snook and Wells (440-109586-1). These dilutions were prepared as follows: 25mL to 50mL

Method(s) 6020A: preparation batch 160-192621 and analytical batch 160-193592

The following samples were diluted due to the nature of the sample matrix. The samples were high in salts, which cause internal standard and QC failures when the samples are run at a lesser dilution: Snook and Wells (440-109586-1), (440-110712-O-1-A), (440-110712-O-1-B MS), (440-110712-O-1-C MSD) and (440-110712-O-1-A SD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Client Sample ID: Snook and Wells

Lab Sample ID: 440-109586-1

Date Collected: 05/12/15 11:40

Matrix: Water

Date Received: 05/12/15 18:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	30		2.0		ug/L			05/14/15 14:51	1
Ethylbenzene	33		2.0		ug/L			05/14/15 14:51	1
m,p-Xylene	3.6		2.0		ug/L			05/14/15 14:51	1
o-Xylene	3.2		2.0		ug/L			05/14/15 14:51	1
Toluene	13		2.0		ug/L			05/14/15 14:51	1
Xylenes, Total	6.8		2.0		ug/L			05/14/15 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		05/14/15 14:51	1
4-Bromofluorobenzene (Surr)	94		80 - 120		05/14/15 14:51	1
Dibromofluoromethane (Surr)	98		76 - 132		05/14/15 14:51	1

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Acenaphthylene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Anthracene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Benzo[a]anthracene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Benzo[a]pyrene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Benzo[b]fluoranthene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Benzo[g,h,i]perylene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Benzo[k]fluoranthene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Chrysene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Dibenz(a,h)anthracene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Fluoranthene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Fluorene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Indeno[1,2,3-cd]pyrene	ND *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Naphthalene	7.8 *		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Phenanthrene	4.2		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10
Pyrene	ND		1.9		ug/L		05/14/15 12:07	05/16/15 09:31	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	56		31 - 120	05/14/15 12:07	05/16/15 09:31	10
Nitrobenzene-d5	0	X *	25 - 133	05/14/15 12:07	05/16/15 09:31	10
Terphenyl-d14	87		10 - 120	05/14/15 12:07	05/16/15 09:31	10

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	21000		5000		ug/L			05/14/15 17:23	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		65 - 140		05/14/15 17:23	100

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	12		2.4		mg/L		05/18/15 11:32	05/18/15 23:37	5
C23-C40	6.7		2.4		mg/L		05/18/15 11:32	05/18/15 23:37	5
C13 - C40	18		2.4		mg/L		05/18/15 11:32	05/18/15 23:37	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	65		45 - 120	05/18/15 11:32	05/18/15 23:37	5

TestAmerica Irvine

Client Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	87		25		mg/L			05/13/15 07:43	50
Nitrate as NO3	ND		25		mg/L			05/13/15 07:43	50
Chloride	4500		500		mg/L			05/13/15 07:59	1000
Sulfate	ND		25		mg/L			05/13/15 07:43	50

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Arsenic	ND	^	0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Barium	4.3		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Beryllium	ND		0.0020		mg/L		05/14/15 16:58	05/15/15 22:19	1
Cadmium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:19	1
Chromium	0.0074		0.0050		mg/L		05/14/15 16:58	05/15/15 22:19	1
Cobalt	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Copper	0.011		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Lead	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:19	1
Molybdenum	ND	^	0.020		mg/L		05/14/15 16:58	05/15/15 22:19	1
Nickel	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Selenium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Thallium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Vanadium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Zinc	ND		0.020		mg/L		05/14/15 16:58	05/15/15 22:19	1
Silver	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:19	1
Lithium	1.5		0.50		mg/L		05/14/15 16:58	05/18/15 13:21	10
Potassium	66		0.50		mg/L		05/14/15 16:58	05/15/15 22:19	1
Manganese	ND		0.20		mg/L		05/14/15 16:58	05/18/15 13:21	10
Magnesium	150		0.020		mg/L		05/14/15 16:58	05/15/15 22:19	1
Iron	4.2		0.040		mg/L		05/14/15 16:58	05/15/15 22:19	1
Strontium	9.5		0.020		mg/L		05/14/15 16:58	05/15/15 22:19	1
Sodium	4000		5.0		mg/L		05/14/15 16:58	05/18/15 13:21	10
Calcium	89		0.10		mg/L		05/14/15 16:58	05/15/15 22:19	1
Boron	57		0.50		mg/L		05/14/15 16:58	05/18/15 13:21	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<10		10	2.3	ug/L		05/28/15 14:34	06/04/15 19:29	10
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<6.7		6.7	1.5	pCi/L		05/28/15 14:34	06/04/15 19:29	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/18/15 11:18	05/18/15 22:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	12000		100		mg/L			05/14/15 19:30	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			05/15/15 15:30	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			05/15/15 15:30	1
Carbonate as CO3	ND		2.4		mg/L			05/15/15 15:30	1
Hydroxide as OH	ND		1.4		mg/L			05/15/15 15:30	1

Client Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Client Sample ID: Snook and Wells

Lab Sample ID: 440-109586-1

Date Collected: 05/12/15 11:40

Matrix: Water

Date Received: 05/12/15 18:40

Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	28.6	U G	56.5	56.6	101	pCi/L	05/18/15 12:38	05/19/15 17:49	1
Gross Beta	32.6	U G	21.7	22.0	32.8	pCi/L	05/18/15 12:38	05/19/15 17:49	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.90		0.291	0.338	0.178	pCi/L	05/14/15 16:43	06/09/15 06:54	1
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110				05/14/15 16:43	06/09/15 06:54	1

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.26		0.446	0.460	0.581	pCi/L	05/14/15 16:44	06/04/15 11:45	1
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Ba Carrier	94.1		40 - 110				05/14/15 16:44	06/04/15 11:45	1
Y Carrier	93.1		40 - 110				05/14/15 16:44	06/04/15 11:45	1

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.16		0.530	0.571	0.581	pCi/L		06/11/15 02:02	1

Client Sample ID: Travel Blank

Lab Sample ID: 440-109586-2

Date Collected: 05/12/15 00:01

Matrix: Water

Date Received: 05/12/15 18:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			05/14/15 10:43	1
Ethylbenzene	ND		2.0		ug/L			05/14/15 10:43	1
m,p-Xylene	ND		2.0		ug/L			05/14/15 10:43	1
o-Xylene	ND		2.0		ug/L			05/14/15 10:43	1
Toluene	ND		2.0		ug/L			05/14/15 10:43	1
Xylenes, Total	ND		2.0		ug/L			05/14/15 10:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	85		80 - 128					05/14/15 10:43	1
4-Bromofluorobenzene (Surr)	99		80 - 120					05/14/15 10:43	1
Dibromofluoromethane (Surr)	99		76 - 132					05/14/15 10:43	1

TestAmerica Irvine

Method Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
9310	Gross Alpha / Beta (GFPC)	SW846	TAL SL
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater",
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Client Sample ID: Snook and Wells

Lab Sample ID: 440-109586-1

Date Collected: 05/12/15 11:40

Matrix: Water

Date Received: 05/12/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	254955	05/14/15 14:51	SS	TAL IRV
Total/NA	Prep	3520C			1055 mL	1 mL	255077	05/14/15 12:07	IVA	TAL IRV
Total/NA	Analysis	8270C SIM		10	1055 mL	1 mL	255456	05/16/15 09:31	AI	TAL IRV
Total/NA	Analysis	8015B		100	10 mL	10 mL	255014	05/14/15 17:23	AT	TAL IRV
Total/NA	Prep	3510C			1055 mL	1 mL	255651	05/18/15 11:32	AP	TAL IRV
Total/NA	Analysis	8015B		5	1055 mL	1 mL	255652	05/18/15 23:37	KW	TAL IRV
Total/NA	Analysis	300.0		50	5 mL		254371	05/13/15 07:43	NN	TAL IRV
Total/NA	Analysis	300.0		50	5 mL		254372	05/13/15 07:43	NN	TAL IRV
Total/NA	Analysis	300.0		1000	5 mL		254372	05/13/15 07:59	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	255166	05/14/15 16:58	APS	TAL IRV
Total Recoverable	Analysis	6010B		10	25 mL	25 mL	255792	05/18/15 13:21	EN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	255166	05/14/15 16:58	APS	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	255627	05/15/15 22:19	EN	TAL IRV
Total/NA	Prep	3010A			25 mL	50 mL	192621	05/28/15 14:34	DAS	TAL SL
Total/NA	Analysis	6020A		10	25 mL	50 mL	193592	06/04/15 19:29	CCB	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	255721	05/18/15 11:18	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	255879	05/18/15 22:16	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			255489	05/15/15 15:30	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	255200	05/14/15 19:30	NTN	TAL IRV
Total/NA	Prep	Evaporation			5 mL	1.0 g	191213	05/18/15 12:38	SCB	TAL SL
Total/NA	Analysis	9310		1	5 mL		191627	05/19/15 17:49	RTM	TAL SL
Total/NA	Prep	PrecSep-21			500.18 mL	1.0 g	190808	05/14/15 16:43	LEM	TAL SL
Total/NA	Analysis	9315		1	500.18 mL		194084	06/09/15 06:54	CDH	TAL SL
Total/NA	Prep	PrecSep_0			500.18 mL	1.0 g	190809	05/14/15 16:44	LEM	TAL SL
Total/NA	Analysis	9320		1	500.18 mL		193519	06/04/15 11:45	MFM	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			194490	06/11/15 02:02	RTM	TAL SL

Client Sample ID: Travel Blank

Lab Sample ID: 440-109586-2

Date Collected: 05/12/15 00:01

Matrix: Water

Date Received: 05/12/15 18:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	254955	05/14/15 10:43	SS	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-254955/4
Matrix: Water
Analysis Batch: 254955

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			05/14/15 08:15	1
Ethylbenzene	ND		2.0		ug/L			05/14/15 08:15	1
m,p-Xylene	ND		2.0		ug/L			05/14/15 08:15	1
o-Xylene	ND		2.0		ug/L			05/14/15 08:15	1
Toluene	ND		2.0		ug/L			05/14/15 08:15	1
Xylenes, Total	ND		2.0		ug/L			05/14/15 08:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		05/14/15 08:15	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/14/15 08:15	1
Dibromofluoromethane (Surr)	101		76 - 132		05/14/15 08:15	1

Lab Sample ID: LCS 440-254955/5
Matrix: Water
Analysis Batch: 254955

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.7		ug/L		99	68 - 130
Ethylbenzene	25.0	22.5		ug/L		90	70 - 130
m,p-Xylene	25.0	23.4		ug/L		94	70 - 130
o-Xylene	25.0	23.3		ug/L		93	70 - 130
Toluene	25.0	22.7		ug/L		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	93		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

Lab Sample ID: 440-109604-A-2 MS
Matrix: Water
Analysis Batch: 254955

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	26.3		ug/L		105	66 - 130
Ethylbenzene	ND		25.0	25.9		ug/L		103	70 - 130
m,p-Xylene	ND		25.0	25.9		ug/L		104	70 - 133
o-Xylene	ND		25.0	26.7		ug/L		107	70 - 133
Toluene	ND		25.0	25.9		ug/L		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 128
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

QC Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-109604-A-2 MSD
Matrix: Water
Analysis Batch: 254955

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		25.0	25.5		ug/L		102	66 - 130	3	20
Ethylbenzene	ND		25.0	24.3		ug/L		97	70 - 130	6	20
m,p-Xylene	ND		25.0	24.9		ug/L		100	70 - 133	4	25
o-Xylene	ND		25.0	25.2		ug/L		101	70 - 133	6	20
Toluene	ND		25.0	24.5		ug/L		98	70 - 130	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 440-255077/1-A
Matrix: Water
Analysis Batch: 255456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255077

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Acenaphthylene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Anthracene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Benzo[a]anthracene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Benzo[a]pyrene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Benzo[b]fluoranthene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Benzo[k]fluoranthene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Chrysene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Fluoranthene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Fluorene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Naphthalene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Phenanthrene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1
Pyrene	ND		0.20		ug/L		05/14/15 12:07	05/15/15 23:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	67		31 - 120	05/14/15 12:07	05/15/15 23:55	1
Nitrobenzene-d5	70		25 - 133	05/14/15 12:07	05/15/15 23:55	1
Terphenyl-d14	73		10 - 120	05/14/15 12:07	05/15/15 23:55	1

Lab Sample ID: LCS 440-255077/2-A
Matrix: Water
Analysis Batch: 255456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.00	0.638		ug/L		64	47 - 103
Acenaphthylene	1.00	0.665		ug/L		67	45 - 102

TestAmerica Irvine

QC Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 440-255077/2-A
Matrix: Water
Analysis Batch: 255456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Anthracene	1.00	0.767		ug/L		77	47 - 111
Benzo[a]anthracene	1.00	0.745		ug/L		75	56 - 110
Benzo[a]pyrene	1.00	0.700		ug/L		70	48 - 110
Benzo[b]fluoranthene	1.00	0.727		ug/L		73	53 - 116
Benzo[g,h,i]perylene	1.00	1.03		ug/L		103	44 - 130
Benzo[k]fluoranthene	1.00	0.753		ug/L		75	51 - 127
Chrysene	1.00	0.784		ug/L		78	52 - 118
Dibenz(a,h)anthracene	1.00	0.838		ug/L		84	44 - 125
Fluoranthene	1.00	0.759		ug/L		76	51 - 116
Fluorene	1.00	0.540		ug/L		54	50 - 106
Indeno[1,2,3-cd]pyrene	1.00	0.853		ug/L		85	41 - 127
Naphthalene	1.00	0.589		ug/L		59	40 - 100
Phenanthrene	1.00	0.756		ug/L		76	49 - 110
Pyrene	1.00	0.745		ug/L		75	41 - 115

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	61		31 - 120
Nitrobenzene-d5	59		25 - 133
Terphenyl-d14	77		10 - 120

Lab Sample ID: LCSD 440-255077/3-A
Matrix: Water
Analysis Batch: 255456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 255077

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Acenaphthene	1.00	0.758		ug/L		76	47 - 103	17	35
Acenaphthylene	1.00	0.789		ug/L		79	45 - 102	17	35
Anthracene	1.00	0.858		ug/L		86	47 - 111	11	35
Benzo[a]anthracene	1.00	0.802		ug/L		80	56 - 110	7	35
Benzo[a]pyrene	1.00	0.778		ug/L		78	48 - 110	11	35
Benzo[b]fluoranthene	1.00	0.804		ug/L		80	53 - 116	10	35
Benzo[g,h,i]perylene	1.00	1.06		ug/L		106	44 - 130	2	35
Benzo[k]fluoranthene	1.00	0.797		ug/L		80	51 - 127	6	35
Chrysene	1.00	0.854		ug/L		85	52 - 118	9	35
Dibenz(a,h)anthracene	1.00	0.862		ug/L		86	44 - 125	3	35
Fluoranthene	1.00	0.855		ug/L		85	51 - 116	12	35
Fluorene	1.00	0.601		ug/L		60	50 - 106	11	35
Indeno[1,2,3-cd]pyrene	1.00	0.889		ug/L		89	41 - 127	4	35
Naphthalene	1.00	0.732		ug/L		73	40 - 100	22	35
Phenanthrene	1.00	0.838		ug/L		84	49 - 110	10	35
Pyrene	1.00	0.795		ug/L		79	41 - 115	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	69		31 - 120
Nitrobenzene-d5	75		25 - 133
Terphenyl-d14	77		10 - 120

QC Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 440-255014/5
Matrix: Water
Analysis Batch: 255014

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			05/14/15 10:59	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		65 - 140					05/14/15 10:59	1

Lab Sample ID: LCS 440-255014/3
Matrix: Water
Analysis Batch: 255014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	837		ug/L		105	80 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	96		65 - 140				

Lab Sample ID: 440-109604-E-2 MS
Matrix: Water
Analysis Batch: 255014

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		800	876		ug/L		104	65 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	89		65 - 140						

Lab Sample ID: 440-109604-E-2 MSD
Matrix: Water
Analysis Batch: 255014

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		800	851		ug/L		101	65 - 140	3	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	106		65 - 140								

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 440-255651/1-A
Matrix: Water
Analysis Batch: 255652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255651

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		05/18/15 07:38	05/18/15 19:18	1
C23-C40	ND		0.50		mg/L		05/18/15 07:38	05/18/15 19:18	1
C13 - C40	ND		0.50		mg/L		05/18/15 07:38	05/18/15 19:18	1

TestAmerica Irvine

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 440-255651/1-A
Matrix: Water
Analysis Batch: 255652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255651

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>n</i> -Octacosane	70		45 - 120	05/18/15 07:38	05/18/15 19:18	1

Lab Sample ID: LCS 440-255651/2-A
Matrix: Water
Analysis Batch: 255652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255651

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	1.00	0.527		mg/L		53	40 - 115
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
<i>n</i> -Octacosane	70		45 - 120				

Lab Sample ID: 440-109582-E-8-B MS
Matrix: Water
Analysis Batch: 255652

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 255651

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28	ND		0.985	0.601		mg/L		61	40 - 120
Surrogate	MS %Recovery	MS Qualifier	Limits						
<i>n</i> -Octacosane	74		45 - 120						

Lab Sample ID: 440-109582-G-8-C MSD
Matrix: Water
Analysis Batch: 255652

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 255651

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	ND		0.985	0.535		mg/L		54	40 - 120	12	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
<i>n</i> -Octacosane	68		45 - 120								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-254371/60
Matrix: Water
Analysis Batch: 254371

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as NO3	ND		0.50		mg/L			05/13/15 03:34	1

Lab Sample ID: LCS 440-254371/61
Matrix: Water
Analysis Batch: 254371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	5.00	5.39		mg/L		108	90 - 110

TestAmerica Irvine

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-109587-A-1 MS
Matrix: Water
Analysis Batch: 254371

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as NO3	66		5.00	70.5	4	mg/L		82	80 - 120

Lab Sample ID: 440-109587-A-1 MSD
Matrix: Water
Analysis Batch: 254371

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	66		5.00	70.6	4	mg/L		84	80 - 120	0	20

Lab Sample ID: MB 440-254372/60
Matrix: Water
Analysis Batch: 254372

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			05/13/15 03:34	1
Chloride	ND		0.50		mg/L			05/13/15 03:34	1
Sulfate	ND		0.50		mg/L			05/13/15 03:34	1

Lab Sample ID: LCS 440-254372/61
Matrix: Water
Analysis Batch: 254372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.31		mg/L		106	90 - 110
Chloride	5.00	5.29		mg/L		106	90 - 110
Sulfate	5.00	5.16		mg/L		103	90 - 110

Lab Sample ID: 440-109587-A-1 MS
Matrix: Water
Analysis Batch: 254372

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		5.00	5.81		mg/L		116	80 - 120
Chloride	100	E	5.00	105	E 4	mg/L		61	80 - 120
Sulfate	130		5.00	130	4	mg/L		53	80 - 120

Lab Sample ID: 440-109587-A-1 MSD
Matrix: Water
Analysis Batch: 254372

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		5.00	5.98		mg/L		120	80 - 120	3	20
Chloride	100	E	5.00	104	E 4	mg/L		43	80 - 120	1	20
Sulfate	130		5.00	128	4	mg/L		24	80 - 120	1	20

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-255166/1-A
Matrix: Water
Analysis Batch: 255627

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Arsenic	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Barium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Beryllium	ND		0.0020		mg/L		05/14/15 16:58	05/15/15 21:40	1
Cadmium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 21:40	1
Chromium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 21:40	1
Cobalt	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Copper	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Lead	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 21:40	1
Molybdenum	ND		0.020		mg/L		05/14/15 16:58	05/15/15 21:40	1
Nickel	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Selenium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Thallium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Vanadium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Zinc	ND		0.020		mg/L		05/14/15 16:58	05/15/15 21:40	1
Silver	ND		0.010		mg/L		05/14/15 16:58	05/15/15 21:40	1
Potassium	ND		0.50		mg/L		05/14/15 16:58	05/15/15 21:40	1
Magnesium	ND		0.020		mg/L		05/14/15 16:58	05/15/15 21:40	1
Iron	ND		0.040		mg/L		05/14/15 16:58	05/15/15 21:40	1
Strontium	ND		0.020		mg/L		05/14/15 16:58	05/15/15 21:40	1
Calcium	ND		0.10		mg/L		05/14/15 16:58	05/15/15 21:40	1

Lab Sample ID: MB 440-255166/1-A
Matrix: Water
Analysis Batch: 255748

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		0.050		mg/L		05/14/15 16:58	05/18/15 10:50	1
Manganese	ND		0.020		mg/L		05/14/15 16:58	05/18/15 10:50	1
Sodium	ND		0.50		mg/L		05/14/15 16:58	05/18/15 10:50	1
Boron	ND		0.050		mg/L		05/14/15 16:58	05/18/15 10:50	1

Lab Sample ID: LCS 440-255166/2-A
Matrix: Water
Analysis Batch: 255627

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	1.04		mg/L		104	80 - 120
Arsenic	1.00	1.04		mg/L		104	80 - 120
Barium	1.00	1.00		mg/L		100	80 - 120
Beryllium	1.00	1.02		mg/L		102	80 - 120
Cadmium	1.00	0.980		mg/L		98	80 - 120
Chromium	1.00	0.957		mg/L		96	80 - 120
Cobalt	1.00	0.980		mg/L		98	80 - 120
Copper	1.00	0.979		mg/L		98	80 - 120
Lead	1.00	0.999		mg/L		100	80 - 120
Molybdenum	1.00	1.04		mg/L		104	80 - 120
Nickel	1.00	1.01		mg/L		101	80 - 120

TestAmerica Irvine

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-255166/2-A
Matrix: Water
Analysis Batch: 255627

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	1.00	0.939		mg/L		94	80 - 120
Thallium	1.00	0.952		mg/L		95	80 - 120
Vanadium	1.00	1.02		mg/L		102	80 - 120
Zinc	1.00	0.976		mg/L		98	80 - 120
Silver	0.500	0.480		mg/L		96	80 - 120
Potassium	10.0	9.60		mg/L		96	80 - 120
Magnesium	5.00	4.82		mg/L		96	80 - 120
Iron	1.00	0.998		mg/L		100	80 - 120
Strontium	1.00	0.965		mg/L		97	80 - 120
Calcium	5.00	4.87		mg/L		97	80 - 120

Lab Sample ID: LCS 440-255166/2-A
Matrix: Water
Analysis Batch: 255748

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	1.00	0.991		mg/L		99	80 - 120
Manganese	1.00	1.06		mg/L		106	80 - 120
Sodium	10.0	10.0		mg/L		100	80 - 120
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 580-49544-C-1-I MS
Matrix: Water
Analysis Batch: 255627

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		1.00	1.06		mg/L		106	75 - 125
Arsenic	ND		1.00	1.08		mg/L		108	75 - 125
Barium	0.022		1.00	1.04		mg/L		101	75 - 125
Beryllium	ND		1.00	1.04		mg/L		104	75 - 125
Cadmium	ND		1.00	0.990		mg/L		99	75 - 125
Chromium	ND		1.00	0.973		mg/L		97	75 - 125
Cobalt	ND		1.00	0.986		mg/L		99	75 - 125
Copper	ND		1.00	1.01		mg/L		101	75 - 125
Lead	ND		1.00	1.02		mg/L		102	75 - 125
Molybdenum	ND		1.00	1.05		mg/L		105	75 - 125
Nickel	ND		1.00	1.00		mg/L		100	75 - 125
Selenium	0.12		1.00	1.07		mg/L		95	75 - 125
Thallium	ND		1.00	0.964		mg/L		96	75 - 125
Vanadium	ND		1.00	1.04		mg/L		104	75 - 125
Zinc	ND		1.00	0.985		mg/L		98	75 - 125
Silver	ND		0.500	0.492		mg/L		98	75 - 125
Potassium	0.77		10.0	10.5		mg/L		97	75 - 125
Magnesium	14		5.00	19.1		mg/L		105	75 - 125
Iron	0.051		1.00	1.08		mg/L		103	75 - 125
Strontium	0.22		1.00	1.20		mg/L		98	75 - 125
Calcium	85		5.00	86.6	4	mg/L		41	75 - 125

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 580-49544-C-1-I MS

Matrix: Water
Analysis Batch: 255748

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Lithium	ND		1.00	0.959		mg/L		96	75 - 125
Manganese	0.037		1.00	1.09		mg/L		106	75 - 125
Sodium	4.7		10.0	14.6		mg/L		99	75 - 125
Boron	ND		1.00	1.05		mg/L		103	75 - 125

Lab Sample ID: 580-49544-C-1-J MSD

Matrix: Water
Analysis Batch: 255627

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Antimony	ND		1.00	1.07		mg/L		107	75 - 125	1	20
Arsenic	ND		1.00	1.09		mg/L		109	75 - 125	1	20
Barium	0.022		1.00	1.04		mg/L		102	75 - 125	0	20
Beryllium	ND		1.00	1.03		mg/L		103	75 - 125	1	20
Cadmium	ND		1.00	0.985		mg/L		98	75 - 125	1	20
Chromium	ND		1.00	0.962		mg/L		96	75 - 125	1	20
Cobalt	ND		1.00	0.989		mg/L		99	75 - 125	0	20
Copper	ND		1.00	1.01		mg/L		101	75 - 125	1	20
Lead	ND		1.00	1.01		mg/L		101	75 - 125	1	20
Molybdenum	ND		1.00	1.06		mg/L		106	75 - 125	0	20
Nickel	ND		1.00	1.00		mg/L		100	75 - 125	0	20
Selenium	0.12		1.00	1.07		mg/L		95	75 - 125	0	20
Thallium	ND		1.00	0.950		mg/L		95	75 - 125	2	20
Vanadium	ND		1.00	1.04		mg/L		104	75 - 125	0	20
Zinc	ND		1.00	0.987		mg/L		99	75 - 125	0	20
Silver	ND		0.500	0.492		mg/L		98	75 - 125	0	20
Potassium	0.77		10.0	10.6		mg/L		98	75 - 125	0	20
Magnesium	14		5.00	19.2		mg/L		106	75 - 125	0	20
Iron	0.051		1.00	1.06		mg/L		101	75 - 125	1	20
Strontium	0.22		1.00	1.22		mg/L		100	75 - 125	2	20
Calcium	85		5.00	87.4	4	mg/L		57	75 - 125	1	20

Lab Sample ID: 580-49544-C-1-J MSD

Matrix: Water
Analysis Batch: 255748

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable
Prep Batch: 255166

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lithium	ND		1.00	0.951		mg/L		95	75 - 125	1	20
Manganese	0.037		1.00	1.08		mg/L		105	75 - 125	1	20
Sodium	4.7		10.0	14.8		mg/L		101	75 - 125	1	20
Boron	ND		1.00	1.05		mg/L		104	75 - 125	0	20

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-192621/1-A
Matrix: Water
Analysis Batch: 193592

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 192621

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.0		1.0	0.23	ug/L		05/28/15 14:34	06/04/15 19:12	2

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.67		0.67	0.15	pCi/L		05/28/15 14:34	06/04/15 19:12	2

Lab Sample ID: LCS 160-192621/2-A
Matrix: Water
Analysis Batch: 193592

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 192621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	1000	975		ug/L		97	80 - 120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Uranium	670	653		pCi/L		97	80 - 120

Lab Sample ID: 440-110712-O-1-B MS
Matrix: Water
Analysis Batch: 193592

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 192621

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	<10		2000	1950		ug/L		98	75 - 125

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Uranium	<6.7		1300	1310		pCi/L		98	75 - 125

Lab Sample ID: 440-110712-O-1-C MSD
Matrix: Water
Analysis Batch: 193592

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 192621

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Uranium	<10		2000	1940		ug/L		97	75 - 125	1	20

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Uranium	<6.7		1300	1300		pCi/L		97	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-255721/1-A
Matrix: Water
Analysis Batch: 255879

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255721

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/18/15 11:18	05/18/15 21:54	1

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 440-255721/2-A
Matrix: Water
Analysis Batch: 255879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255721

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.00800	0.00692		mg/L		87	80 - 120

Lab Sample ID: 440-109505-D-1-C MS
Matrix: Water
Analysis Batch: 255879

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 255721

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.00800	0.00900		mg/L		111	70 - 130

Lab Sample ID: 440-109505-D-1-D MSD
Matrix: Water
Analysis Batch: 255879

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 255721

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.00800	0.00909		mg/L		112	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-255489/3
Matrix: Water
Analysis Batch: 255489

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			05/15/15 12:57	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			05/15/15 12:57	1
Carbonate as CO3	ND		2.4		mg/L			05/15/15 12:57	1
Hydroxide as OH	ND		1.4		mg/L			05/15/15 12:57	1

Lab Sample ID: LCS 440-255489/2
Matrix: Water
Analysis Batch: 255489

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Alkalinity as CaCO3	85.4	84.9		mg/L		99	80 - 120

Lab Sample ID: 440-109623-C-1 DU
Matrix: Water
Analysis Batch: 255489

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Alkalinity as CaCO3	350		367		mg/L		4	20
Bicarbonate ion as HCO3	430		448		mg/L		4	20
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

QC Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-255200/1
Matrix: Water
Analysis Batch: 255200

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			05/14/15 19:30	1

Lab Sample ID: LCS 440-255200/2
Matrix: Water
Analysis Batch: 255200

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	970		mg/L		97	90 - 110

Lab Sample ID: 440-109374-A-1 DU
Matrix: Water
Analysis Batch: 255200

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1000		978		mg/L		3	5

Method: 9310 - Gross Alpha / Beta (GFPC)

Lab Sample ID: MB 160-191213/1-A
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 191213

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	1.048	U	0.854	0.862	1.31	pCi/L	05/18/15 12:38	05/19/15 17:48	1
Gross Beta	0.3227	U	0.522	0.523	0.856	pCi/L	05/18/15 12:38	05/19/15 17:48	1

Lab Sample ID: LCS 160-191213/2-A
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 191213

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	50.0	48.93		7.46	2.93	pCi/L	98	73 - 133

Lab Sample ID: LCSB 160-191213/3-A
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 191213

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	95.0	95.09		10.0	0.926	pCi/L	100	75 - 125

QC Sample Results

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 9310 - Gross Alpha / Beta (GFPC) (Continued)

Lab Sample ID: 160-11837-D-1-C MS
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 191213

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	11.6	G	65.0	70.69		11.6	3.87	pCi/L	91	60 - 140

Lab Sample ID: 160-11837-D-1-D MSBT
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 191213

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	12.5		123	133.3		14.0	1.30	pCi/L	98	60 - 140

Lab Sample ID: 160-11837-D-1-B DU
Matrix: Water
Analysis Batch: 191627

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 191213

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	MDC	Unit	RER	RER Limit
Gross Alpha	11.6	G	12.06	G	4.42	4.89	pCi/L	0.05	1
Gross Beta	12.5		11.47		1.92	1.42	pCi/L	0.25	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-190808/1-A
Matrix: Water
Analysis Batch: 194084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 190808

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.009233	U	0.0988	0.0988	0.187	pCi/L	05/14/15 16:43	06/09/15 06:53	1
Carrier	%Yield	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Ba Carrier	108		40 - 110				05/14/15 16:43	06/09/15 06:53	1

Lab Sample ID: LCS 160-190808/2-A
Matrix: Water
Analysis Batch: 194084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190808

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-226	22.3	23.59		2.33	0.188	pCi/L	106	68 - 137
Carrier	LCS %Yield	LCS Qualifier	Limits					
Ba Carrier	120	X	40 - 110					

QC Sample Results

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 9315 - Radium-226 (GFPC) (Continued)

Lab Sample ID: LCSD 160-190808/3-A
Matrix: Water
Analysis Batch: 194084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 190808

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226	22.3	23.61		2.33	0.196	pCi/L	106	68 - 137	0.01	1
Carrier	%Yield	LCSD Qualifier	Limits							
Ba Carrier	109		40 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-190809/1-A
Matrix: Water
Analysis Batch: 193519

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 190809

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.1371	U	0.393	0.393	0.680	pCi/L	05/14/15 16:44	06/04/15 11:44	1
Carrier	%Yield	MB Qualifier	Limits						
Ba Carrier	108		40 - 110						
Y Carrier	91.2		40 - 110						
							Prepared	Analyzed	Dil Fac
							05/14/15 16:44	06/04/15 11:44	1
							05/14/15 16:44	06/04/15 11:44	1

Lab Sample ID: LCS 160-190809/2-A
Matrix: Water
Analysis Batch: 193519

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 190809

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Radium-228	6.80	6.123		0.956	0.659	pCi/L	90	56 - 140
Carrier	%Yield	LCS Qualifier	Limits					
Ba Carrier	120	X	40 - 110					
Y Carrier	90.5		40 - 110					

Lab Sample ID: LCSD 160-190809/3-A
Matrix: Water
Analysis Batch: 193519

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 190809

Analyte	Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228	6.80	6.845		1.03	0.700	pCi/L	101	56 - 140	0.36	1
Carrier	%Yield	LCSD Qualifier	Limits							
Ba Carrier	109		40 - 110							
Y Carrier	89.3		40 - 110							

QC Association Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

GC/MS VOA

Analysis Batch: 254955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	8260B	
440-109586-2	Travel Blank	Total/NA	Water	8260B	
440-109604-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-109604-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-254955/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-254955/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 255077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	3520C	
LCS 440-255077/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-255077/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-255077/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 255456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	8270C SIM	255077
LCS 440-255077/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	255077
LCSD 440-255077/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	255077
MB 440-255077/1-A	Method Blank	Total/NA	Water	8270C SIM	255077

GC VOA

Analysis Batch: 255014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	8015B	
440-109604-E-2 MS	Matrix Spike	Total/NA	Water	8015B	
440-109604-E-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
LCS 440-255014/3	Lab Control Sample	Total/NA	Water	8015B	
MB 440-255014/5	Method Blank	Total/NA	Water	8015B	

GC Semi VOA

Prep Batch: 255651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109582-E-8-B MS	Matrix Spike	Total/NA	Water	3510C	
440-109582-G-8-C MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	
440-109586-1	Snook and Wells	Total/NA	Water	3510C	
LCS 440-255651/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 440-255651/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 255652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109582-E-8-B MS	Matrix Spike	Total/NA	Water	8015B	255651
440-109582-G-8-C MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	255651
440-109586-1	Snook and Wells	Total/NA	Water	8015B	255651
LCS 440-255651/2-A	Lab Control Sample	Total/NA	Water	8015B	255651
MB 440-255651/1-A	Method Blank	Total/NA	Water	8015B	255651

TestAmerica Irvine

QC Association Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

HPLC/IC

Analysis Batch: 254371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	300.0	
440-109587-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-109587-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-254371/61	Lab Control Sample	Total/NA	Water	300.0	
MB 440-254371/60	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 254372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	300.0	
440-109586-1	Snook and Wells	Total/NA	Water	300.0	
440-109587-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-109587-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 440-254372/61	Lab Control Sample	Total/NA	Water	300.0	
MB 440-254372/60	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 192621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	3010A	
440-110712-O-1-B MS	Matrix Spike	Total/NA	Water	3010A	
440-110712-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	
LCS 160-192621/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-192621/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 193592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	6020A	192621
440-110712-O-1-B MS	Matrix Spike	Total/NA	Water	6020A	192621
440-110712-O-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6020A	192621
LCS 160-192621/2-A	Lab Control Sample	Total/NA	Water	6020A	192621
MB 160-192621/1-A	Method Blank	Total/NA	Water	6020A	192621

Prep Batch: 255166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total Recoverable	Water	3005A	
580-49544-C-1-I MS	Matrix Spike	Total Recoverable	Water	3005A	
580-49544-C-1-J MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
LCS 440-255166/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 440-255166/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 255627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total Recoverable	Water	6010B	255166
580-49544-C-1-I MS	Matrix Spike	Total Recoverable	Water	6010B	255166
580-49544-C-1-J MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	255166
LCS 440-255166/2-A	Lab Control Sample	Total Recoverable	Water	6010B	255166
MB 440-255166/1-A	Method Blank	Total Recoverable	Water	6010B	255166

QC Association Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Metals (Continued)

Prep Batch: 255721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109505-D-1-C MS	Matrix Spike	Total/NA	Water	7470A	
440-109505-D-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
440-109586-1	Snook and Wells	Total/NA	Water	7470A	
LCS 440-255721/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-255721/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 255748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-49544-C-1-I MS	Matrix Spike	Total Recoverable	Water	6010B	255166
580-49544-C-1-J MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	255166
LCS 440-255166/2-A	Lab Control Sample	Total Recoverable	Water	6010B	255166
MB 440-255166/1-A	Method Blank	Total Recoverable	Water	6010B	255166

Analysis Batch: 255792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total Recoverable	Water	6010B	255166

Analysis Batch: 255879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109505-D-1-C MS	Matrix Spike	Total/NA	Water	7470A	255721
440-109505-D-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	255721
440-109586-1	Snook and Wells	Total/NA	Water	7470A	255721
LCS 440-255721/2-A	Lab Control Sample	Total/NA	Water	7470A	255721
MB 440-255721/1-A	Method Blank	Total/NA	Water	7470A	255721

General Chemistry

Analysis Batch: 255200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109374-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-109586-1	Snook and Wells	Total/NA	Water	SM 2540C	
LCS 440-255200/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-255200/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 255489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	SM 2320B	
440-109623-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-255489/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-255489/3	Method Blank	Total/NA	Water	SM 2320B	

Rad

Prep Batch: 190808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	PrecSep-21	
LCS 160-190808/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-190808/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	
MB 160-190808/1-A	Method Blank	Total/NA	Water	PrecSep-21	

TestAmerica Irvine

QC Association Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Rad (Continued)

Prep Batch: 190809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109586-1	Snook and Wells	Total/NA	Water	PrecSep_0	
LCS 160-190809/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-190809/3-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	
MB 160-190809/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 191213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11837-D-1-B DU	Duplicate	Total/NA	Water	Evaporation	
160-11837-D-1-C MS	Matrix Spike	Total/NA	Water	Evaporation	
160-11837-D-1-D MSBT	Matrix Spike	Total/NA	Water	Evaporation	
440-109586-1	Snook and Wells	Total/NA	Water	Evaporation	
LCS 160-191213/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-191213/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
MB 160-191213/1-A	Method Blank	Total/NA	Water	Evaporation	

Definitions/Glossary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable limits
X	Surrogate is outside control limits

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.
X	Carrier is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: Envirotech Consultants, Inc.
 Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
 SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

Laboratory: TestAmerica St. Louis

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	MO00054	06-30-15 *
California	ELAP	9	2886	03-31-16
Connecticut	State Program	1	PH-0241	03-31-17
Florida	NELAP	4	E87689	06-30-15 *
Illinois	NELAP	5	200023	11-30-15
Iowa	State Program	7	373	12-01-16
Kansas	NELAP	7	E-10236	10-31-15
Kentucky (DW)	State Program	4	90125	12-31-15
L-A-B	DoD ELAP		L2305	01-10-16
Louisiana	NELAP	6	04080	06-30-15 *
Louisiana (DW)	NELAP	6	LA150017	12-31-16
Maryland	State Program	3	310	09-30-15
Missouri	State Program	7	780	06-30-15 *
Nevada	State Program	9	MO000542013-1	07-31-15 *
New Jersey	NELAP	2	MO002	06-30-15 *
New Mexico	State Program	6		06-30-10 *
New York	NELAP	2	11616	03-31-16
North Dakota	State Program	8	R207	06-30-15 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-15
Pennsylvania	NELAP	3	68-00540	02-28-16
South Carolina	State Program	4	85002001	06-30-15 *
Texas	NELAP	6	T104704193-13-6	07-31-15 *
USDA	Federal		P330-07-00122	01-09-17
Utah	NELAP	8	MO000542013-5	07-31-15
Virginia	NELAP	3	460230	06-14-15 *
Washington	State Program	10	C592	08-30-15
West Virginia DEP	State Program	3	381	08-31-15

* Certification renewal pending - certification considered valid.

Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-109586-1

SDG Number: Snook and Wells Lease, Midway-Sunset Oil Field

Login Number: 109586

List Source: TestAmerica Irvine

List Number: 1

Creator: Blocker, Kristina M

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Envirotech Consultants, Inc.
Project/Site: RWQCB Pond Testing, 2015

TestAmerica Job ID: 440-109586-1
SDG: Snook and Wells Lease, Midway-Sunset Oil Field

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)							
440-109586-1	Snook and Wells	94.1							
LCS 160-190808/2-A	Lab Control Sample	120 X							
LCSD 160-190808/3-A	Lab Control Sample Dup	109							
MB 160-190808/1-A	Method Blank	108							

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

Percent Yield (Acceptance Limits)

Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)						
440-109586-1	Snook and Wells	94.1	93.1						
LCS 160-190809/2-A	Lab Control Sample	120 X	90.5						
LCSD 160-190809/3-A	Lab Control Sample Dup	109	89.3						
MB 160-190809/1-A	Method Blank	108	91.2						

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier