EnviroTech
Consultants, Inc.
5400 Rosedale Highway
Bakersfield, CA 93308

BALLARD OIL, INC
RESPONSE TO RWQCB SECTION 13267 ORDER
POND INFORMATION AND SAMPLING RESULTS

CYMRIC OIL FIELD
OVERLAND ANDERSON LEASE
SECTION 20 T29S/R21E MDB&M

MIDWAY SUNSET OIL FIELD
NEWSON-WINDES LEASE
SECTION 7 T11N/R23W MDB&M

June 12, 2015

Prepared by:

EnviroTech Consultants, Inc.

M. Jane Ellis-McNaboe, PG

REGISTERED GEOLOGIST
M. JANE ELLIS-McNABOE
exp. 01/16
4127
STATE OF CALIFORNIA

June 12, 2015

Certification Statement

RWQCB Order 13267, Pond Sampling Technical Report
Ballard Oil, Inc

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 an imprisonment for knowing violations.

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ATTACHMENTS

1.0 IDENTIFICATION OF DISCHARGES OF PRODUCED WATER TO LAND

Two ponds were identified by the Regional Water Quality Control Board (RWQCB) containing discharges of produced water on the Overland Anderson lease. Two ponds were identified by the RWQCB containing discharges of produced water on the Newson-Windes lease. Maps of the ponds and surrounding leases are included as Attachments A and B.

2.0 POND SAMPLING

Representative samples of wastewater were collected by EnviroTech Consultants, Inc. (EnviroTech) from the ponds on May 12, 2015 as required by Order 13267 dated April 1, 2015 (Attachment C). The two ponds on the Overland Anderson lease are in series so only one data sample is required. The two ponds on the Newson-Windes lease are in series so only one data sample is required. The samples were collected from the inlet pipe, the pipe leading from the wash tank to the pond. The 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 final laboratory analytical report on June 11, 2015. The analytical results are summarized in the following tables; complete laboratory reports are included in Attachment D.

Table 3-1: General Chemistry

Sample ID	Date Sampled	Total Dissolved Solids	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Strontium	Alkalinity as CaCO3	Bicarbonate ion as HCO3	Carbonate as CO3	Hydroxide as OH
EPA Analytical Method		2540C_Calcd	6010B							2320B			
Units		mg/L											
Reporting limit		Reporting limits vary, see full analytical report.											
		Results											
Overland Anderson	5/12/2015	**18,000**	**270**	**28**	**150**	**0.4**	**120**	**6,600**	**33**	<4.0	<4.8	<2.4	<1.4
Newson-Windes	5/12/2015	**24,000**	**160**	**3.7**	**50**	<0.2	**110**	**4,600**	**6.6**	**3,300**	**4,000**	<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 complete analytical report.			
Overland Anderson	5/12/2015	**170**	**8,400**	<50	**<50**
Newson-Windes	5/12/2015	**100**	**4,400**	<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 complete analytical report.									
Overland Anderson	5/12/2015	<0.01	<0.01	**19**	<0.002	**87**	<0.005	**0.0096**	<0.01	<0.01	<0.005
Newson-Windes	5/12/2015	<0.01	<0.01	**3.3**	<0.002	**77**	<0.005	<0.005	<0.01	<0.01	<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 complete analytical report.									
Overland Anderson	5/12/2015	**1.6**	<0.02	<0.01	<0.01	<0.01	**33**	<0.01	<0.01	<0.02	<0.0002
Newson-Windes	5/12/2015	**1.9**	<0.02	<0.01	<0.01	<0.01	**6.6**	<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		82602B				8015B_GRO	8015B_DRO	
Units		ug/L				ug/L	mg/L	
Reporting Limit		Varies, see laboratory report					2.5	
Overland Anderson	5/12/2015	<2.0	**2.2**	<2.0	**14**	**120**	**14**	**12**
Newson-Windes	5/12/2015	**22.0**	**92.0**	**5.0**	**7**	**7,700**	**46**	**49**

Bold = Analyte detected at or above minimum reporting limit.

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															
Overland Anderson	5/12/2015	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**1.6**	**1.3**
Newson-Windes	5/12/2015	**10**	<3.8	<3.8	<3.8	<3.8	<3.8	**5.9**	<3.8	<3.8	<3.8	<3.8	**12**	<3.8	**24**	**39**	**6.6**

Bold = Analyte detected at or above minimum reporting limit.
Reporting limit varies by sample. See full analytic 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
Overland Anderson	5/12/2015	44.0±108	**85.4±45.5**	**13.9±1.49**	**6.54±0.98**	<6.7
Newson-Windes	5/12/2015	27.2±73.2	**116±37.9**	**7.98±0.928**	**5.36±0.861**	<6.7

Bold = Analyte detected at or above minimum reporting limit.
Results are expressed as ± Total Uncertainty
Reporting limit varies by sample. See full analytic report.
* Title 22, Table 6443. MCL
-- No Regulatory Threshold

4.0 INFORMATION FOR EACH SURFACE IMPOUNDMENT

The following table contains the required information for the Ballard Oil, Inc Overland Anderson and Newson-Windes ponds.

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)	Volume of wastewater discharged per year (bbls)
Overland Anderson #1	Length	Width	Depth	Latitude:35.39440°	098-142-38	156	4214
	48'	105'	2'	Longitude: -119.73454°			
Overland Anderson #2	Length	Width	Depth	Latitude:35.39435°	098-142-38	156	4214
	38'	112'	2'	Longitude: -119.73482°			
Newson-Windes #1	Length	Width	Depth	Latitude:35.05165°	239-300-29	160	9084
	45'	90'	2'	Longitude: -119.37130°			
Newson-Windes #2	Length	Width	Depth	Latitude:35.05165°	239-300-13	160	9084
	40'	64'	2'	Longitude: -119.37130°			

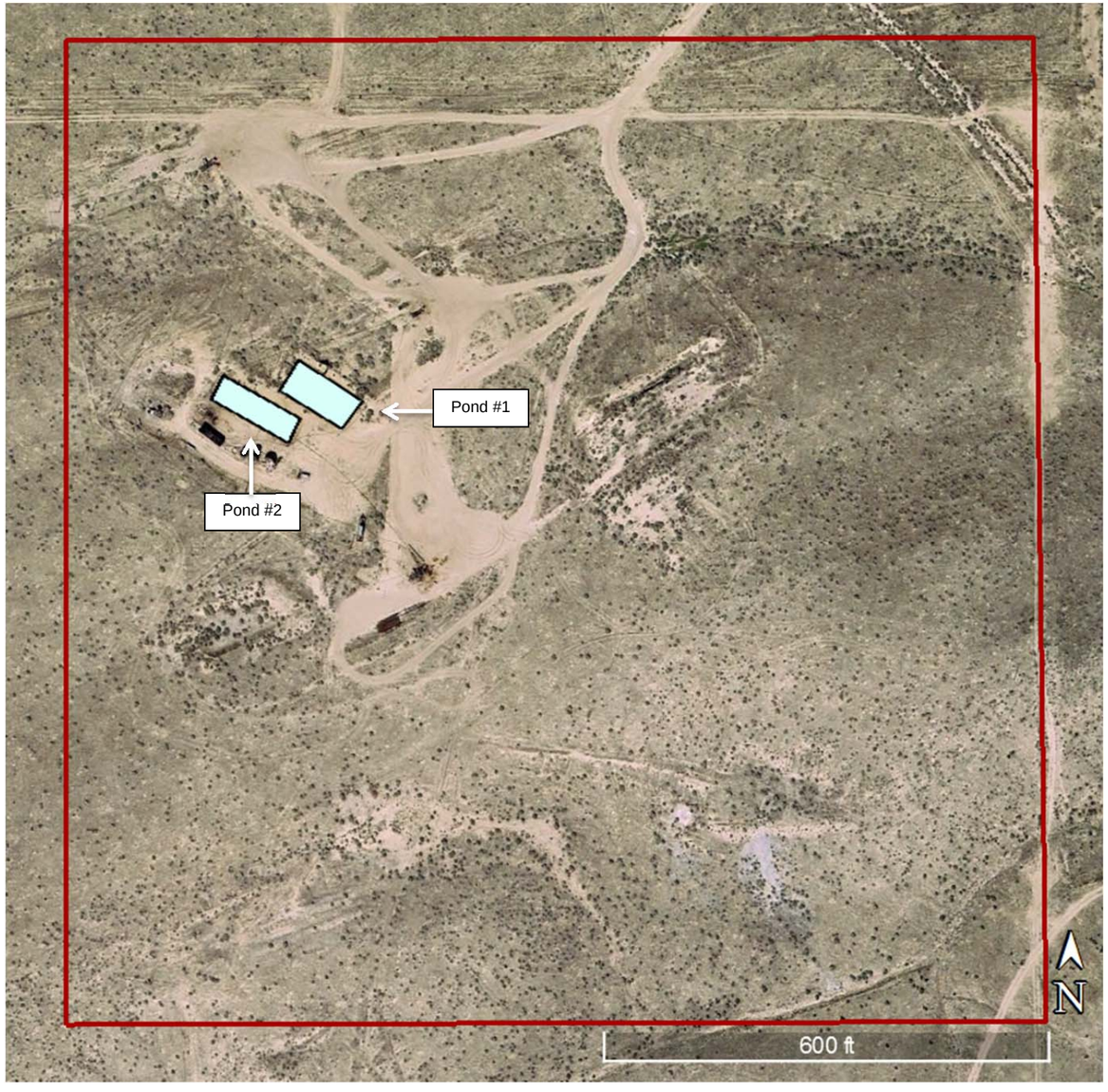
ATTACHMENT A

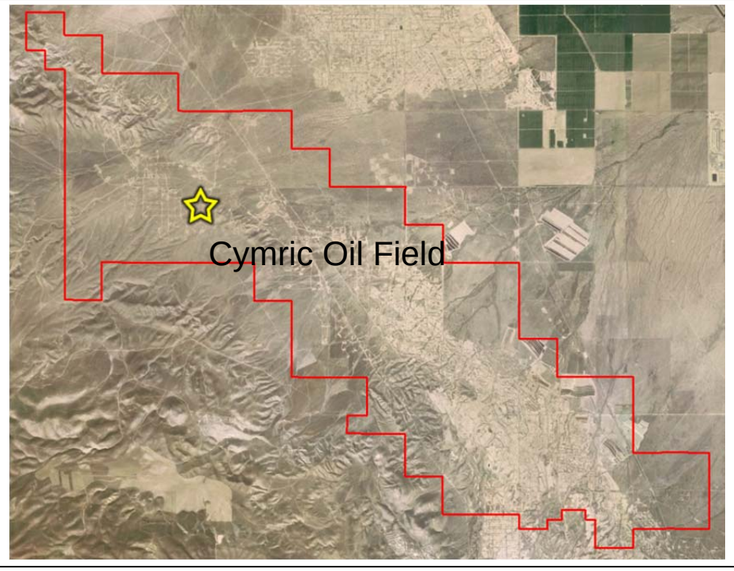
BALLARD OIL, INC

OVERLAND ANDERSON PONDS MAP

5400 Rosedale Highway • Bakersfield, CA 93308 • Tel 661.377.0073 • Fax 661.377.0074

Ballard Oil, Inc.





Legend

Overland Anderson Lease

Overland Anderson Lease Ponds

Pond #1:
Length – 48’
Width – 105’
Depth –2’

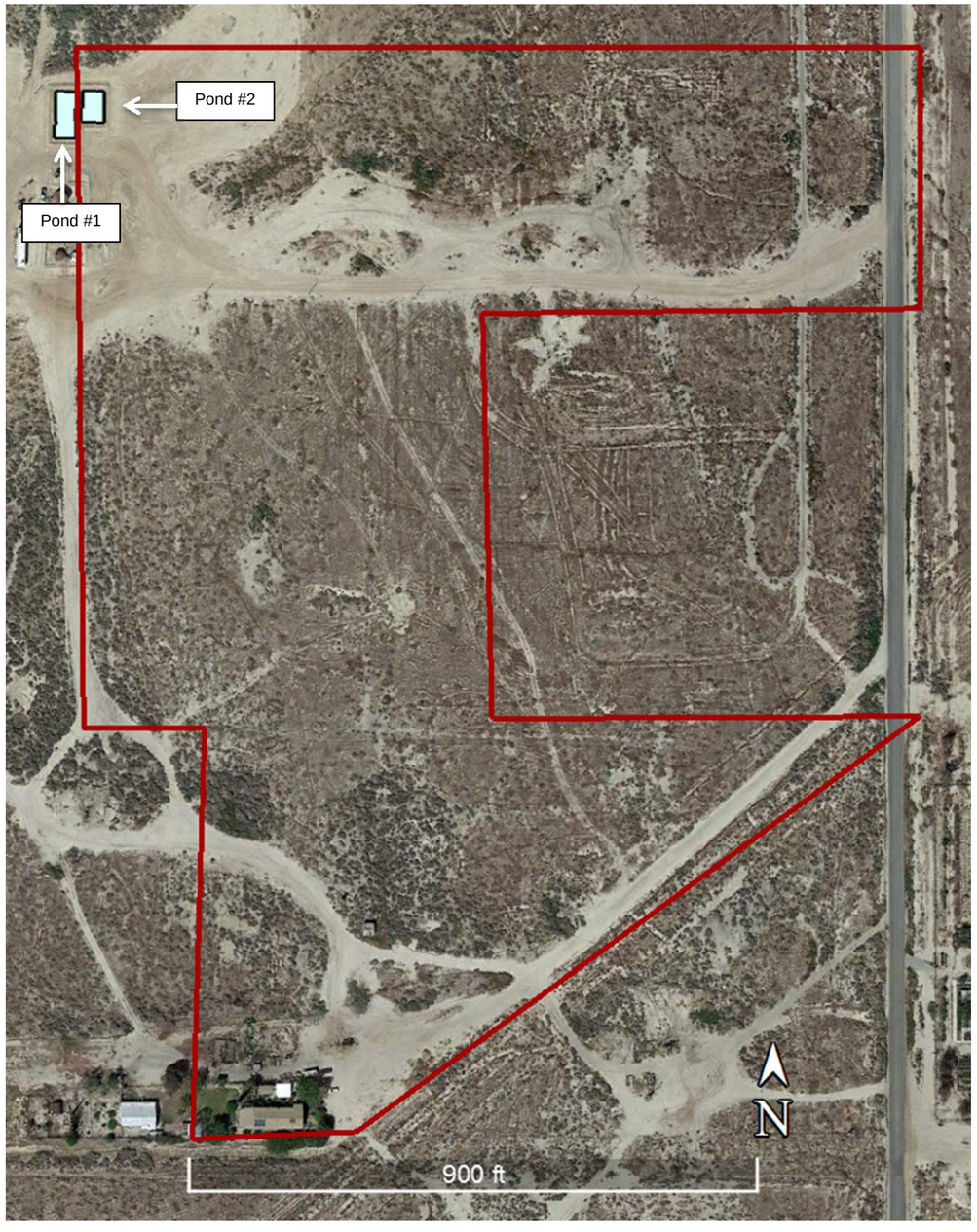
Pond #2:
Length – 38’
Width – 112’
Depth – 2’

Prepared By:	**TITLE:**	Overland Anderson Lease Ponds
EnviroTech Consultants, Inc.	**FIELD:**	Cymric Oil Field
	COUNTY:	Kern
Section/Township/Range	**DRN BY:**	Kelsey Padilla
T29S/R21E – Section 20 MDB&M (Middle1/3 of the W ½ of the NW ¼)	**DATE:**	May 28, 2015

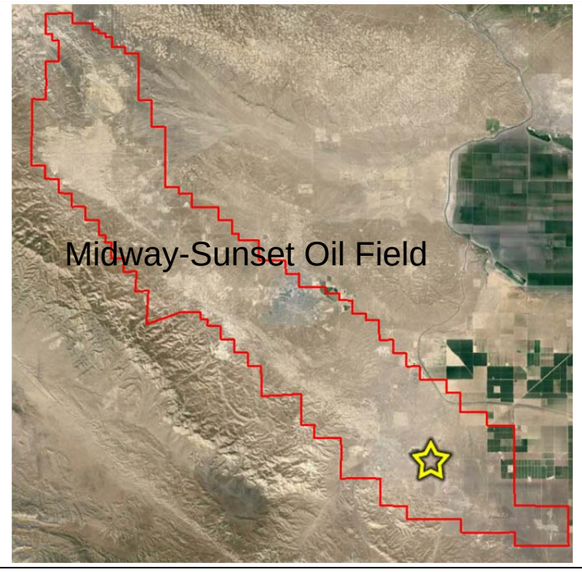
ATTACHMENT B

BALLARD OIL, INC

NEWSON-WINDES PONDS MAP



Ballard Oil, Inc.



Legend

Newsom-Windes Lease

Newsom-Windes Lease Ponds

Pond #1:
Length – 45’
Width – 90’
Depth –2’

Pond #2:
Length – 40’
Width –64’
Depth – 2’

Prepared By:	**TITLE:**	Newsom-Windes Lease Ponds
EnviroTech Consultants, Inc.	**FIELD:**	Midway-Sunset Oil Field
	COUNTY:	Kern
Section/Township/Range	**DRN BY:**	Kelsey Padilla
T11N/R23W – Section 7 MDB&M (NW ¼ of the SE ¼ of the W ½)	**DATE:**	May 28, 2015

ATTACHMENT C

BALLARD OIL, INC

COPY OF RWQCB ORDER 13267, 1 APRIL, 2015

CALIFORNIA
Water Boards

Edmund G. Brown Jr.
Governor

Matthew Rodriquez
Secretary for
Environmental Protection

Central Valley Regional Water Quality Control Board

1 April 2015

Matthew Ballard
Ballard Oil Inc.
P.O. Box 82513
Bakersfield, CA 93380-2513

CERTIFIED MAIL
7014 3490 0001 7023 0056

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

Ballard Oil Inc. (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:

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.

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

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
Ballard Oil Inc.	Cymric	Overland Anderson	2
	Midway-Sunset	Newsom-Windes	2

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 D

BALLARD OIL, INC

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: 440-109584-1
TestAmerica SDG: Overland Anderson Lease, Cymric 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 3:14:08 PM

Janice Hsu, Project Manager I
(949)261-1022
janice.hsu@testamericainc.com

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Sample Summary

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

TestAmerica Job ID: 440-109584-1
SDG: Overland Anderson Lease, Cymric Oil Field

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-109584-1	Overland Anderson	Water	05/12/15 08:15	05/12/15 20:50
440-109584-2	Travel Blank	Water	05/12/15 00:01	05/12/15 20:50

Job ID: 440-109584-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-109584-1

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 2.7º C.

GC/MS VOA
Method(s) 8260B: The following volatile samples were received and analyzed with significant headspace in the sample vials: Overland Anderson (440-109584-1), (440-109584-A-1 MS) and (440-109584-A-1 MSD). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, pH=7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Overland Anderson (440-109584-1), (440-109584-A-1 MS) and (440-109584-A-1 MSD).

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 internal standard response was below the 50% minimum QC limit for the following samples: Overland Anderson (440-109584-1). 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 sample was diluted due to the abundance of non-target analytes: Overland Anderson (440-109584-1). 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 sample was diluted for Sulfate due to the nature of the sample matrix: Overland Anderson (440-109584-1). 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 sample was diluted for Nitrate due to the nature of the sample matrix: Overland Anderson (440-109584-1). 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
Method(s) 8015B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, pH=7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Overland Anderson (440-109584-1).

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

Job ID: 440-109584-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

GC Semi VOA
Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 255291. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch. (LCS 440-255291/2-A)

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 sample is impacted: Overland Anderson (440-109584-1).

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
440-109584-2

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 2.7º 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: Overland Anderson (440-109584-1), (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: Overland Anderson (440-109584-1), (LCS 160-190808/2-A), (LCSD 160-190808/3-A) and (MB 160-190808/1-A).

Method(s) 9315: Radium 226 Prep Batch 190808:
The following samples have barium carrier recoveries above the 110% QC limit; 440-109584-O-1-A (121%), and 440-109585-Q-1-A (126%) due to possible matrix interference (see prep non-conformance memo 57358). The LCS/LCSD (laboratory control sample/laboratory control sample duplicate) associated with 160-190808 have acceptable spike recoveries demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported. Overland Anderson (440-109584-1).

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.

Job ID: 440-109584-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

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: Overland Anderson (440-109584-1), (LCS 160-190809/2-A), (LCSD 160-190809/3-A) and (MB 160-190809/1-A).

Method(s) 9320: Radium 228 Prep Batch 190809:
The following samples have barium carrier recoveries above the 110% QC limit; 440-109584-O-1-B (121%), and 440-109585-Q-1-B (126%) due to possible matrix interference (see prep non-conformance memo 57358). The LCS/LCSD (laboratory control sample/laboratory control sample duplicate) associated with 160-190809 have acceptable spike recoveries demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported. Overland Anderson (440-109584-1).

Method(s) PrecSep_0: radium-228 batch 190809 and radium-226 batch 190808
A deviation from the Standard Operating Procedure (SOP) occurred. The following sample were oily and had a strong odor: Overland Anderson (440-109584-1) . 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.

Method(s) PrecSep_0: radium-228 batch 190809 and radium-226 batch 190808
The barium carrier recovery is outside the upper control limit (110%) for the following samples: Overland Anderson (440-109584-1). The recoveries were laboratory control sample 190808 (120.058%), 440-109584-1 (155.457%), and 440-109585 (131.858%). No abnormalities were observed while these sample sample were being taken out of ingrowth.

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: Overland Anderson (440-109584-1). 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: Overland Anderson (440-109584-1), (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 ID: Overland Anderson

Date Collected: 05/12/15 08:15
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109584-1

Matrix: Water

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 16:03	1
Ethylbenzene	**2.2**		2.0		ug/L			05/14/15 16:03	1
m,p-Xylene	**9.8**		2.0		ug/L			05/14/15 16:03	1
o-Xylene	**4.2**		2.0		ug/L			05/14/15 16:03	1
Toluene	ND		2.0		ug/L			05/14/15 16:03	1
Xylenes, Total	**14**		2.0		ug/L			05/14/15 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*05/14/15 16:03*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*05/14/15 16:03*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*05/14/15 16:03*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Acenaphthylene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Anthracene	ND		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Benzo[a]anthracene	ND		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Benzo[a]pyrene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Benzo[b]fluoranthene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Benzo[g,h,i]perylene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Benzo[k]fluoranthene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Chrysene	ND		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Dibenz(a,h)anthracene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Fluoranthene	ND		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Fluorene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Indeno[1,2,3-cd]pyrene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Naphthalene	ND	*	1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Phenanthrene	**1.6**		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5
Pyrene	**1.3**		1.0		ug/L		05/14/15 12:07	05/16/15 09:11	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*64*	*	*31 - 120*	*05/14/15 12:07*	*05/16/15 09:11*	*5*
Nitrobenzene-d5	*91*	*	*25 - 133*	*05/14/15 12:07*	*05/16/15 09:11*	*5*
Terphenyl-d14	*106*		*10 - 120*	*05/14/15 12:07*	*05/16/15 09:11*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**120**		50		ug/L			05/15/15 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*65 - 140*		*05/15/15 21:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	**14**		5.0		mg/L		05/15/15 07:58	05/16/15 12:40	10
C23-C40	**12**		5.0		mg/L		05/15/15 07:58	05/16/15 12:40	10
C13 - C40	**26**		5.0		mg/L		05/15/15 07:58	05/16/15 12:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*68*		*45 - 120*	*05/15/15 07:58*	*05/16/15 12:40*	*10*

Client Sample Results

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

TestAmerica Job ID: 440-109584-1
SDG: Overland Anderson Lease, Cymric Oil Field

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**170**		50		mg/L			05/13/15 06:41	100
Nitrate as NO3	ND		50		mg/L			05/13/15 06:41	100
Chloride	**8400**		1000		mg/L			05/13/15 06:56	2000
Sulfate	ND		50		mg/L			05/13/15 06:41	100

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 22:15	1
Arsenic	ND	^	0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Barium	**19**		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Beryllium	ND		0.0020		mg/L		05/14/15 16:58	05/15/15 22:15	1
Cadmium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:15	1
Chromium	**0.0096**		0.0050		mg/L		05/14/15 16:58	05/15/15 22:15	1
Cobalt	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Copper	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Lead	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:15	1
Molybdenum	ND	^	0.020		mg/L		05/14/15 16:58	05/15/15 22:15	1
Nickel	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Selenium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Thallium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Vanadium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Zinc	ND		0.020		mg/L		05/14/15 16:58	05/15/15 22:15	1
Silver	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:15	1
Lithium	**1.6**		0.50		mg/L		05/14/15 16:58	05/18/15 11:07	10
Potassium	**120**		0.50		mg/L		05/14/15 16:58	05/15/15 22:15	1
Manganese	**0.40**		0.20		mg/L		05/14/15 16:58	05/18/15 11:07	10
Magnesium	**150**		0.020		mg/L		05/14/15 16:58	05/15/15 22:15	1
Iron	**28**		0.040		mg/L		05/14/15 16:58	05/15/15 22:15	1
Strontium	**33**		0.20		mg/L		05/14/15 16:58	05/18/15 11:07	10
Sodium	**6600**		5.0		mg/L		05/14/15 16:58	05/18/15 11:07	10
Calcium	**270**		0.10		mg/L		05/14/15 16:58	05/15/15 22:15	1
Boron	**87**		0.50		mg/L		05/14/15 16:58	05/18/15 11:07	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 19:20	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 19:20	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 22:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**18000**		200		mg/L			05/14/15 19:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			05/17/15 14:24	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			05/17/15 14:24	1
Carbonate as CO3	ND		2.4		mg/L			05/17/15 14:24	1
Hydroxide as OH	ND		1.4		mg/L			05/17/15 14:24	1

Client Sample ID: Overland Anderson

Lab Sample ID: 440-109584-1
Date Collected: 05/12/15 08:15
Matrix: Water
Date Received: 05/12/15 20:50

Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	44.0	U G	108	108	194	pCi/L	05/18/15 12:38	05/19/15 17:53	1
Gross Beta	**85.4**	**G**	44.7	45.5	66.0	pCi/L	05/18/15 12:38	05/19/15 17:53	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**13.9**		0.803	1.49	0.211	pCi/L	05/14/15 16:43	06/09/15 06:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*121*	*X*	*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	**6.54**		0.773	0.980	0.627	pCi/L	05/14/15 16:44	06/04/15 11:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*121*	*X*	*40 - 110*	*05/14/15 16:44*	*06/04/15 11:44*	*1*
Y Carrier	*92.3*		*40 - 110*	*05/14/15 16:44*	*06/04/15 11:44*	*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	**20.44**		1.11	1.783	0.627	pCi/L		06/11/15 02:02	1

Client Sample ID: Travel Blank

Lab Sample ID: 440-109584-2
Date Collected: 05/12/15 00:01
Matrix: Water
Date Received: 05/12/15 20:50

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 18:02	1
Ethylbenzene	ND		2.0		ug/L			05/14/15 18:02	1
m,p-Xylene	ND		2.0		ug/L			05/14/15 18:02	1
o-Xylene	ND		2.0		ug/L			05/14/15 18:02	1
Toluene	ND		2.0		ug/L			05/14/15 18:02	1
Xylenes, Total	ND		2.0		ug/L			05/14/15 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 128*		*05/14/15 18:02*	*1*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*		*05/14/15 18:02*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*05/14/15 18:02*	*1*

Method Summary

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

TestAmerica Job ID: 440-109584-1
SDG: Overland Anderson Lease, Cymric 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: 440-109584-1
SDG: Overland Anderson Lease, Cymric Oil Field

Client Sample ID: Overland Anderson

Lab Sample ID: 440-109584-1
Matrix: Water
Date Collected: 05/12/15 08:15
Date Received: 05/12/15 20:50

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	254960	05/14/15 16:03	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1 mL	255077	05/14/15 12:07	IVA	TAL IRV
Total/NA	Analysis	8270C SIM		5	1005 mL	1 mL	255456	05/16/15 09:11	AI	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	255405	05/15/15 21:51	AK	TAL IRV
Total/NA	Prep	3510C			1005 mL	1 mL	255291	05/15/15 07:58	MMT	TAL IRV
Total/NA	Analysis	8015B		10	1005 mL	1 mL	255492	05/16/15 12:40	KW	TAL IRV
Total/NA	Analysis	300.0		100	5 mL		254371	05/13/15 06:41	NN	TAL IRV
Total/NA	Analysis	300.0		100	5 mL		254372	05/13/15 06:41	NN	TAL IRV
Total/NA	Analysis	300.0		2000	5 mL		254372	05/13/15 06:56	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	255748	05/18/15 11:07	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 22:15	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 19:20	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 22:11	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			255608	05/17/15 14:24	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	255200	05/14/15 19:30	NTN	TAL IRV
Total/NA	Prep	Evaporation			3 mL	1.0 g	191213	05/18/15 12:38	SCB	TAL SL
Total/NA	Analysis	9310		1	3 mL		191435	05/19/15 17:53	RTM	TAL SL
Total/NA	Prep	PrecSep-21			500.95 mL	1.0 g	190808	05/14/15 16:43	LEM	TAL SL
Total/NA	Analysis	9315		1	500.95 mL		194084	06/09/15 06:54	CDH	TAL SL
Total/NA	Prep	PrecSep_0			500.95 mL	1.0 g	190809	05/14/15 16:44	LEM	TAL SL
Total/NA	Analysis	9320		1	500.95 mL		193519	06/04/15 11:44	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: 440-109584-2
Matrix: Water
Date Collected: 05/12/15 00:01
Date Received: 05/12/15 20:50

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	254960	05/14/15 18:02	RM	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

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

Lab Sample ID: MB 440-254960/4
Matrix: Water
Analysis Batch: 254960

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 08:23	1
Ethylbenzene	ND		2.0		ug/L			05/14/15 08:23	1
m,p-Xylene	ND		2.0		ug/L			05/14/15 08:23	1
o-Xylene	ND		2.0		ug/L			05/14/15 08:23	1
Toluene	ND		2.0		ug/L			05/14/15 08:23	1
Xylenes, Total	ND		2.0		ug/L			05/14/15 08:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 128*		*05/14/15 08:23*	*1*
4-Bromofluorobenzene (Surr)	*81*		*80 - 120*		*05/14/15 08:23*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*05/14/15 08:23*	*1*

Lab Sample ID: LCS 440-254960/5
Matrix: Water
Analysis Batch: 254960

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	21.7		ug/L		87	68 - 130
Ethylbenzene	25.0	20.3		ug/L		81	70 - 130
m,p-Xylene	25.0	23.4		ug/L		94	70 - 130
o-Xylene	25.0	23.8		ug/L		95	70 - 130
Toluene	25.0	19.9		ug/L		80	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*80 - 128*
4-Bromofluorobenzene (Surr)	*84*		*80 - 120*
Dibromofluoromethane (Surr)	*120*		*76 - 132*

Lab Sample ID: 440-109584-1 MS
Matrix: Water
Analysis Batch: 254960

Client Sample ID: Overland Anderson
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	25.4		ug/L		95	66 - 130
Ethylbenzene	2.2		25.0	24.6		ug/L		90	70 - 130
m,p-Xylene	9.8		25.0	35.1		ug/L		101	70 - 133
o-Xylene	4.2		25.0	30.4		ug/L		105	70 - 133
Toluene	ND		25.0	23.9		ug/L		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 128*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*112*		*76 - 132*

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

Lab Sample ID: 440-109584-1 MSD
Matrix: Water
Analysis Batch: 254960

Client Sample ID: Overland Anderson
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	22.0		ug/L		82	66 - 130	14	20
Ethylbenzene	2.2		25.0	21.6		ug/L		78	70 - 130	13	20
m,p-Xylene	9.8		25.0	31.5		ug/L		87	70 - 133	11	25
o-Xylene	4.2		25.0	26.8		ug/L		90	70 - 133	13	20
Toluene	ND		25.0	21.2		ug/L		81	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*111*		*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

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	%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	%Rec. Limits	RPD	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*

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

Lab Sample ID: MB 440-255405/5
Matrix: Water
Analysis Batch: 255405

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			05/15/15 15:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*65 - 140*		*05/15/15 15:33*	*1*

Lab Sample ID: LCS 440-255405/4
Matrix: Water
Analysis Batch: 255405

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	918		ug/L		115	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*65 - 140*

Lab Sample ID: 440-109363-E-1 MS
Matrix: Water
Analysis Batch: 255405

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)	56000		800000	818000		ug/L		95	65 - 140		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*65 - 140*

Lab Sample ID: 440-109363-E-1 MSD
Matrix: Water
Analysis Batch: 255405

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)	56000		800000	853000		ug/L		100	65 - 140	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*65 - 140*

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

Lab Sample ID: MB 440-255291/1-A
Matrix: Water
Analysis Batch: 255491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255291

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		05/15/15 07:58	05/16/15 09:20	1
C23-C40	ND		0.50		mg/L		05/15/15 07:58	05/16/15 09:20	1
C13 - C40	ND		0.50		mg/L		05/15/15 07:58	05/16/15 09:20	1

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

Lab Sample ID: MB 440-255291/1-A
Matrix: Water
Analysis Batch: 255491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255291

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane	87		45 - 120	05/15/15 07:58	05/16/15 09:20	1

Lab Sample ID: LCS 440-255291/2-A
Matrix: Water
Analysis Batch: 255491

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 255291

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			1.00	0.853		mg/L		85	40 - 115		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane	96		45 - 120

Lab Sample ID: LCSD 440-255291/3-A
Matrix: Water
Analysis Batch: 255491

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 255291

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			1.00	0.839		mg/L		84	40 - 115	2	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane	94		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		

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		

Method: 300.0 - Anions, Ion Chromatography (Continued)

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
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
Sulfate	130		5.00	128	4	mg/L		24	80 - 120	1	20

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

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

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
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
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
Strontium	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	%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
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

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
Iron	1.00	0.998		mg/L		100	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
Strontium	1.00	1.03		mg/L		103	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
Calcium	85		5.00	86.6	4	mg/L		41	75 - 125

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	%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
Strontium	0.23		1.00	1.26		mg/L		103	75 - 125
Sodium	4.7		10.0	14.6		mg/L		99	75 - 125

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	%Rec. Limits
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	%Rec. Limits	RPD	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
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	%Rec. Limits	RPD	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
Strontium	0.23		1.00	1.29		mg/L		105	75 - 125	2	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

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	%Rec. Limits
Uranium	1000	975		ug/L		97	80 - 120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%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	%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	%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	%Rec. Limits	RPD	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	%Rec. Limits	RPD	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

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	%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	%Rec. Limits
Mercury	ND		0.00800	0.00900		mg/L		111	70 - 130

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

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	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00909		mg/L		112	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-255608/3
Matrix: Water
Analysis Batch: 255608

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			05/17/15 12:20	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			05/17/15 12:20	1
Carbonate as CO3	ND		2.4		mg/L			05/17/15 12:20	1
Hydroxide as OH	ND		1.4		mg/L			05/17/15 12:20	1

Lab Sample ID: LCS 440-255608/2
Matrix: Water
Analysis Batch: 255608

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3			85.4	81.2		mg/L		95	80 - 120		

Lab Sample ID: 440-110184-B-11 DU
Matrix: Water
Analysis Batch: 255608

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	250			240		mg/L				2	20
Bicarbonate ion as HCO3	300			293		mg/L				2	20
Carbonate as CO3	ND			ND		mg/L				NC	20
Hydroxide as OH	ND			ND		mg/L				NC	20

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		

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

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		

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		

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

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	*MB %Yield*	*MB 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*

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	*LCSD %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	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*05/14/15 16:44*	*06/04/15 11:44*	*1*
Y Carrier	*91.2*		*40 - 110*	*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	*LCS %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	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*
Y Carrier	*89.3*		*40 - 110*

GC/MS VOA

Analysis Batch: 254960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	Total/NA	Water	8260B	
440-109584-1 MS	Overland Anderson	Total/NA	Water	8260B	
440-109584-1 MSD	Overland Anderson	Total/NA	Water	8260B	
440-109584-2	Travel Blank	Total/NA	Water	8260B	
LCS 440-254960/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-254960/4	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
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	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: 255405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109363-E-1 MS	Matrix Spike	Total/NA	Water	8015B	
440-109363-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
440-109584-1	Overland Anderson	Total/NA	Water	8015B	
LCS 440-255405/4	Lab Control Sample	Total/NA	Water	8015B	
MB 440-255405/5	Method Blank	Total/NA	Water	8015B	

GC Semi VOA

Prep Batch: 255291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	Total/NA	Water	3510C	
LCS 440-255291/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-255291/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-255291/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 255491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-255291/2-A	Lab Control Sample	Total/NA	Water	8015B	255291
LCSD 440-255291/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	255291
MB 440-255291/1-A	Method Blank	Total/NA	Water	8015B	255291

GC Semi VOA (Continued)

Analysis Batch: 255492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	Total/NA	Water	8015B	255291

HPLC/IC

Analysis Batch: 254371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	Total/NA	Water	300.0	
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	Total Recoverable	Water	6010B	255166

Metals (Continued)

Analysis Batch: 255627 (Continued)

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

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	
440-109584-1	Overland Anderson	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
440-109584-1	Overland Anderson	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

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
440-109584-1	Overland Anderson	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	
440-109584-1	Overland Anderson	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: 255608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	Total/NA	Water	SM 2320B	
440-110184-B-11 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-255608/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-255608/3	Method Blank	Total/NA	Water	SM 2320B	

Rad

Prep Batch: 190808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	Total/NA	Water	PrecSep-21	

Rad (Continued)

Prep Batch: 190808 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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	

Prep Batch: 190809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-1	Overland Anderson	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	
440-109584-1	Overland Anderson	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	

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	ISTD response or retention time outside acceptable 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.

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.
¤	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: 440-109584-1
SDG: Overland Anderson Lease, Cymric 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.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other: **RWQCB Orders**

TestAmerica Laboratories, Inc.

Client Contact	**Project Manager: Jane McNaboe**	**Site Contact: Jane McNaboe**	**Date:**	COC No:
EnviroTech Consultants, Inc.	**Tel/Fax: 661-377-0073 X 11**	**Lab Contact: Janice Hsu**	**Carrier:**	_____ of _____ COCs
5400 Rosedale Highway	**Analysis Turnaround Time**			Sampler:
Bakersfield, CA 93308	☐ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
(661) 377-0073 Phone	TAT if different from Below _____			Walk-in Client:
(661) 377-0074 FAX	☐ 2 weeks			Lab Sampling:
Project Name: RWQCB Pond Testing, 2015	☐ 1 week			
Site: Overland Anderson Lease, Cymric Oil Field	☐ 2 days			Job / SDG No.:
P O # : BAL110	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SM 2540C TDS	6010B CAM Metals	7470A Mercury (CVAA)	8260B BTEX	8015B C13-C22/C23-C40(Crude oil	PAH List 8270C SIM SVOC	300.0 Chloride, Bromide, Sulfate	300.0 Nitrate NO3	SM 2320B Alkalinity all forms ioni	9310 Gross Alpha	9315 Rad226	9320 Rad 228	6020A Uranium	Ra226_RA228	8015B C4 - C12, TPH	Travel Blank (1) 8260	Sample Specific Notes: See Attached
Overland Anderson	5/12/2015	0815		Water	20	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Please analyze the samples to meet the RWQCB requirements on the attached sheet. Please identify the 8015B resutls as crude oil.

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: 3.9 Corr'd: 2.7 Therm ID No.: 71		
Relinquished by: Richard Thielen	Company: Envirotech	Date/Time: 5/12/15 1525	Received by: Lathf	Company:	Date/Time: 5/12/15 15:25
Relinquished by: Lathf	Company:	Date/Time: 5/12/15 2050	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAI	Date/Time: 05/12/15 20:50

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

440-109584 Chain of Custody

5/13/15 8:55

Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-109584-1
SDG Number: Overland Anderson Lease, Cymric Oil Field

Login Number: 109584
List Number: 1
Creator: Blocker, Kristina M

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 440-109584-1
SDG: Overland Anderson Lease, Cymric Oil Field

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)	
		Ba	
Lab Sample ID	Client Sample ID	(40-110)	
440-109584-1	Overland Anderson	121 X	
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)		
		Ba	Y	
Lab Sample ID	Client Sample ID	(40-110)	(40-110)	
440-109584-1	Overland Anderson	121 X	92.3	
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

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-109585-1
TestAmerica SDG: Newson-Windes 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 3:28:31 PM

Janice Hsu, Project Manager I
(949)261-1022
janice.hsu@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-109585-1
SDG: Newson-Windes Lease, Midway Sunset Oil Field

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-109585-1	Newson-Windes	Water	05/12/15 09:50	05/12/15 20:50
440-109585-2	Travel Blank	Water	05/12/15 00:01	05/12/15 20:50

Job ID: 440-109585-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-109585-1

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 1.8º C.

GC/MS VOA
Method(s) 8260B: The following volatile samples were received and analyzed with significant headspace in the sample vials: Newson-Windes (440-109585-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, pH=7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Newson-Windes (440-109585-1).

Method(s) 8260B: The following volatile sample was analyzed with significant headspace in the sample vial due to multiple run performed: Travel Blank (440-109585-2). 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: 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 sample required a dilution due to the nature of the sample matrix: Newson-Windes (440-109585-1). 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: Newson-Windes (440-109585-1). 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.

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 sample was diluted for Sulfate due to the nature of the sample matrix: Newson-Windes (440-109585-1). 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 sample was diluted for Nitrate due to the nature of the sample matrix: Newson-Windes (440-109585-1). 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

Job ID: 440-109585-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Method(s) 8015B: The following sample required a dilution due to the nature of the sample matrix: Newson-Windes (440-109585-1). 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 sample is impacted: Newson-Windes (440-109585-1).

Method(s) 6010B: The following sample was diluted due to the nature of the sample matrix: Newson-Windes (440-109585-1). 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
Method(s) SM 2320B: The method blank for 156185 contained alkalinity> above the reporting limit (RL). Associated sample was not re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or 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
440-109585-2

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 1.8° 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: Newson-Windes (440-109585-1), (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: Newson-Windes (440-109585-1), (LCS 160-190808/2-A), (LCSD 160-190808/3-A) and (MB 160-190808/1-A).

Method(s) 9315: Radium 226 Prep Batch 190808:
The following samples have barium carrier recoveries above the 110% QC limit; 440-109584-O-1-A (121%), and 440-109585-Q-1-A (126%) due to possible matrix interference (see prep non-conformance memo 57358). The LCS/LCSD (laboratory control sample/laboratory control sample duplicate) associated with 160-190808 have acceptable spike recoveries demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier

Job ID: 440-109585-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

recovery may have. The data have been qualified and reported. Newson-Windes (440-109585-1).

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: Newson-Windes (440-109585-1), (LCS 160-190809/2-A), (LCSD 160-190809/3-A) and (MB 160-190809/1-A).

Method(s) 9320: Radium 228 Prep Batch 190809:
The following samples have barium carrier recoveries above the 110% QC limit; 440-109584-O-1-B (121%), and 440-109585-Q-1-B (126%) due to possible matrix interference (see prep non-conformance memo 57358). The LCS/LCSD (laboratory control sample/laboratory control sample duplicate) associated with 160-190809 have acceptable spike recoveries demonstrating acceptable sample preparation and instrument performance. The samples have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported. Newson-Windes (440-109585-1).

Method(s) PrecSep_0: radium-228 batch 190809 and radium-226 batch 190808
A deviation from the Standard Operating Procedure (SOP) occurred. The following sample were oily and had a strong odor: Newson-Windes (440-109585-1) . 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.

Method(s) PrecSep_0: radium-228 batch 190809 and radium-226 batch 190808
The barium carrier recovery is outside the upper control limit (110%) for the following samples: Newson-Windes (440-109585-1). The recoveries were laboratory control sample 190808 (120.058%), 440-109584-1 (155.457%), and 440-109585 (131.858%). No abnormalities were observed while these sample sample were being taken out of ingrowth.

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: Newson-Windes (440-109585-1). 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: Newson-Windes (440-109585-1), (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 ID: Newson-Windes

Date Collected: 05/12/15 09:50
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109585-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		2.0		ug/L			05/14/15 17:32	1
m,p-Xylene	**2.8**		2.0		ug/L			05/14/15 17:32	1
o-Xylene	**4.3**		2.0		ug/L			05/14/15 17:32	1
Toluene	**5.0**		2.0		ug/L			05/14/15 17:32	1
Xylenes, Total	**7.1**		2.0		ug/L			05/14/15 17:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 128*		*05/14/15 17:32*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*05/14/15 17:32*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*05/14/15 17:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	**92**		10		ug/L			05/15/15 06:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*05/15/15 06:07*	*5*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*05/15/15 06:07*	*5*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*05/15/15 06:07*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**10**		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Acenaphthylene	ND		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Anthracene	ND		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Benzo[a]anthracene	ND		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Benzo[a]pyrene	ND	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Benzo[b]fluoranthene	ND	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Benzo[g,h,i]perylene	**5.9**	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Benzo[k]fluoranthene	ND	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Chrysene	ND		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Dibenz(a,h)anthracene	ND	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Fluoranthene	ND		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Fluorene	**12**		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Indeno[1,2,3-cd]pyrene	ND	*	3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Naphthalene	**24**		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Phenanthrene	**39**		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20
Pyrene	**6.6**		3.8		ug/L		05/14/15 12:07	05/18/15 18:42	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*119*		*31 - 120*	*05/14/15 12:07*	*05/18/15 18:42*	*20*
Nitrobenzene-d5	*0*	*X*	*25 - 133*	*05/14/15 12:07*	*05/18/15 18:42*	*20*
Terphenyl-d14	*0*	*X*	*10 - 120*	*05/14/15 12:07*	*05/18/15 18:42*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**7700**		5000		ug/L			05/14/15 16:56	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*65 - 140*		*05/14/15 16:56*	*100*

Client Sample Results

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

TestAmerica Job ID: 440-109585-1
SDG: Newson-Windes Lease, Midway Sunset Oil Field

Client Sample ID: Newson-Windes

Date Collected: 05/12/15 09:50
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109585-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	46		9.5		mg/L		05/18/15 11:32	05/19/15 08:22	20
C23-C40	49		9.5		mg/L		05/18/15 11:32	05/19/15 08:22	20
C13 - C40	96		9.5		mg/L		05/18/15 11:32	05/19/15 08:22	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*7*	*X*	*45 - 120*	*05/18/15 11:32*	*05/19/15 08:22*	*20*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	100		25		mg/L			05/13/15 07:12	50
Nitrate as NO3	ND		25		mg/L			05/13/15 07:12	50
Chloride	4400		500		mg/L			05/13/15 07:28	1000
Sulfate	ND		25		mg/L			05/13/15 07:12	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 22:17	1
Arsenic	ND	^	0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Barium	3.3		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Beryllium	ND		0.0020		mg/L		05/14/15 16:58	05/15/15 22:17	1
Cadmium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:17	1
Chromium	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:17	1
Cobalt	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Copper	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Lead	ND		0.0050		mg/L		05/14/15 16:58	05/15/15 22:17	1
Molybdenum	ND	^	0.020		mg/L		05/14/15 16:58	05/15/15 22:17	1
Nickel	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Selenium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Thallium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Vanadium	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Zinc	ND		0.020		mg/L		05/14/15 16:58	05/15/15 22:17	1
Silver	ND		0.010		mg/L		05/14/15 16:58	05/15/15 22:17	1
Lithium	1.9		0.50		mg/L		05/14/15 16:58	05/18/15 13:19	10
Potassium	110		0.50		mg/L		05/14/15 16:58	05/15/15 22:17	1
Manganese	ND		0.20		mg/L		05/14/15 16:58	05/18/15 13:19	10
Magnesium	50		0.020		mg/L		05/14/15 16:58	05/15/15 22:17	1
Iron	3.7		0.040		mg/L		05/14/15 16:58	05/15/15 22:17	1
Strontium	6.6		0.020		mg/L		05/14/15 16:58	05/15/15 22:17	1
Sodium	4600		5.0		mg/L		05/14/15 16:58	05/18/15 13:19	10
Calcium	160		0.10		mg/L		05/14/15 16:58	05/15/15 22:17	1
Boron	77		0.50		mg/L		05/14/15 16:58	05/18/15 13:19	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 19:24	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 19:24	10

Client Sample ID: Newson-Windes

Lab Sample ID: 440-109585-1

Date Collected: 05/12/15 09:50

Matrix: Water

Date Received: 05/12/15 20:50

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 22:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**24000**		200		mg/L			05/14/15 19:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**3300**	**B**	4.0		mg/L			05/20/15 05:30	1
Bicarbonate ion as HCO3	**4000**	**B**	4.8		mg/L			05/20/15 05:30	1
Carbonate as CO3	ND		2.4		mg/L			05/20/15 05:30	1
Hydroxide as OH	ND		1.4		mg/L			05/20/15 05:30	1

Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	27.2	U G	73.1	73.2	135	pCi/L	05/18/15 12:38	05/19/15 17:53	1
Gross Beta	**116**	**G**	36.1	37.9	46.3	pCi/L	05/18/15 12:38	05/19/15 17:53	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**7.98**		0.588	0.928	0.172	pCi/L	05/14/15 16:43	06/09/15 06:54	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*126*	*X*	*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	**5.36**		0.706	0.861	0.563	pCi/L	05/14/15 16:44	06/04/15 11:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*126*	*X*	*40 - 110*	*05/14/15 16:44*	*06/04/15 11:45*	*1*
Y Carrier	*89.7*		*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	**13.34**		0.920	1.266	0.563	pCi/L		06/11/15 02:02	1

Client Sample ID: Travel Blank

Lab Sample ID: 440-109585-2

Date Collected: 05/12/15 00:01

Matrix: Water

Date Received: 05/12/15 20:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			05/16/15 02:45	1

Client Sample ID: Travel Blank

Date Collected: 05/12/15 00:01
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109585-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		2.0		ug/L			05/16/15 02:45	1
m,p-Xylene	ND		2.0		ug/L			05/16/15 02:45	1
o-Xylene	ND		2.0		ug/L			05/16/15 02:45	1
Toluene	ND		2.0		ug/L			05/16/15 02:45	1
Xylenes, Total	ND		2.0		ug/L			05/16/15 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*05/16/15 02:45*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*05/16/15 02:45*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*05/16/15 02:45*	*1*

Method Summary

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

TestAmerica Job ID: 440-109585-1
SDG: Newson-Windes 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: 440-109585-1
SDG: Newson-Windes Lease, Midway Sunset Oil Field

Client Sample ID: Newson-Windes

Date Collected: 05/12/15 09:50
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109585-1

Matrix: Water

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	254960	05/14/15 17:32	RM	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	255155	05/15/15 06:07	MP	TAL IRV
Total/NA	Prep	3520C			1045 mL	1 mL	255077	05/14/15 12:07	IVA	TAL IRV
Total/NA	Analysis	8270C SIM		20	1045 mL	1 mL	255704	05/18/15 18:42	AI	TAL IRV
Total/NA	Analysis	8015B		100	10 mL	10 mL	255014	05/14/15 16:56	AT	TAL IRV
Total/NA	Prep	3510C			1050 mL	1 mL	255651	05/18/15 11:32	AP	TAL IRV
Total/NA	Analysis	8015B		20	1050 mL	1 mL	255966	05/19/15 08:22	KW	TAL IRV
Total/NA	Analysis	300.0		50	5 mL		254371	05/13/15 07:12	NN	TAL IRV
Total/NA	Analysis	300.0		50	5 mL		254372	05/13/15 07:12	NN	TAL IRV
Total/NA	Analysis	300.0		1000	5 mL		254372	05/13/15 07:28	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 13:19	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 22:17	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 19:24	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 22:14	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1	25 mL	25 mL	256185	05/20/15 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	255200	05/14/15 19:30	NTN	TAL IRV
Total/NA	Prep	Evaporation			4 mL	1.0 g	191213	05/18/15 12:38	SCB	TAL SL
Total/NA	Analysis	9310		1	4 mL		191435	05/19/15 17:53	RTM	TAL SL
Total/NA	Prep	PrecSep-21			500.13 mL	1.0 g	190808	05/14/15 16:43	LEM	TAL SL
Total/NA	Analysis	9315		1	500.13 mL		194084	06/09/15 06:54	CDH	TAL SL
Total/NA	Prep	PrecSep_0			500.13 mL	1.0 g	190809	05/14/15 16:44	LEM	TAL SL
Total/NA	Analysis	9320		1	500.13 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

Date Collected: 05/12/15 00:01
Date Received: 05/12/15 20:50

Lab Sample ID: 440-109585-2

Matrix: Water

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	255421	05/16/15 02:45	WK	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

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

Lab Sample ID: MB 440-254960/4
Matrix: Water
Analysis Batch: 254960

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 08:23	1
Ethylbenzene	ND		2.0		ug/L			05/14/15 08:23	1
m,p-Xylene	ND		2.0		ug/L			05/14/15 08:23	1
o-Xylene	ND		2.0		ug/L			05/14/15 08:23	1
Toluene	ND		2.0		ug/L			05/14/15 08:23	1
Xylenes, Total	ND		2.0		ug/L			05/14/15 08:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 128*		*05/14/15 08:23*	*1*
4-Bromofluorobenzene (Surr)	*81*		*80 - 120*		*05/14/15 08:23*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*05/14/15 08:23*	*1*

Lab Sample ID: LCS 440-254960/5
Matrix: Water
Analysis Batch: 254960

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	21.7		ug/L		87	68 - 130
Ethylbenzene	25.0	20.3		ug/L		81	70 - 130
m,p-Xylene	25.0	23.4		ug/L		94	70 - 130
o-Xylene	25.0	23.8		ug/L		95	70 - 130
Toluene	25.0	19.9		ug/L		80	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*80 - 128*
4-Bromofluorobenzene (Surr)	*84*		*80 - 120*
Dibromofluoromethane (Surr)	*120*		*76 - 132*

Lab Sample ID: 440-109584-A-1 MS
Matrix: Water
Analysis Batch: 254960

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	25.4		ug/L		95	66 - 130
Ethylbenzene	2.2		25.0	24.6		ug/L		90	70 - 130
m,p-Xylene	9.8		25.0	35.1		ug/L		101	70 - 133
o-Xylene	4.2		25.0	30.4		ug/L		105	70 - 133
Toluene	ND		25.0	23.9		ug/L		92	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 128*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*112*		*76 - 132*

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

Lab Sample ID: 440-109584-A-1 MSD
Matrix: Water
Analysis Batch: 254960

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	22.0		ug/L		82	66 - 130	14	20
Ethylbenzene	2.2		25.0	21.6		ug/L		78	70 - 130	13	20
m,p-Xylene	9.8		25.0	31.5		ug/L		87	70 - 133	11	25
o-Xylene	4.2		25.0	26.8		ug/L		90	70 - 133	13	20
Toluene	ND		25.0	21.2		ug/L		81	70 - 130	12	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*111*		*76 - 132*

Lab Sample ID: MB 440-255155/4
Matrix: Water
Analysis Batch: 255155

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		2.0		ug/L			05/14/15 20:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*05/14/15 20:20*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*05/14/15 20:20*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*05/14/15 20:20*	*1*

Lab Sample ID: LCS 440-255155/5
Matrix: Water
Analysis Batch: 255155

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	25.0	24.7		ug/L		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 440-109750-A-3 MS
Matrix: Water
Analysis Batch: 255155

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
Ethylbenzene	ND		25.0	25.5		ug/L		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*76 - 132*

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

Lab Sample ID: 440-109750-A-3 MSD
Matrix: Water
Analysis Batch: 255155

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
Ethylbenzene	ND		25.0	25.4		ug/L		101	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

Lab Sample ID: MB 440-255421/3
Matrix: Water
Analysis Batch: 255421

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			05/15/15 19:39	1
Ethylbenzene	ND		2.0		ug/L			05/15/15 19:39	1
m,p-Xylene	ND		2.0		ug/L			05/15/15 19:39	1
o-Xylene	ND		2.0		ug/L			05/15/15 19:39	1
Toluene	ND		2.0		ug/L			05/15/15 19:39	1
Xylenes, Total	ND		2.0		ug/L			05/15/15 19:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*05/15/15 19:39*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*05/15/15 19:39*	*1*
Dibromofluoromethane (Surr)	*100*		*76 - 132*		*05/15/15 19:39*	*1*

Lab Sample ID: LCS 440-255421/4
Matrix: Water
Analysis Batch: 255421

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	28.5		ug/L		114	68 - 130
Ethylbenzene	25.0	27.8		ug/L		111	70 - 130
m,p-Xylene	25.0	30.0		ug/L		120	70 - 130
o-Xylene	25.0	29.7		ug/L		119	70 - 130
Toluene	25.0	29.3		ug/L		117	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*114*		*80 - 128*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Lab Sample ID: 440-109639-A-1 MS
Matrix: Water
Analysis Batch: 255421

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	28.7		ug/L		115	66 - 130
Ethylbenzene	ND		25.0	27.5		ug/L		110	70 - 130

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

Lab Sample ID: 440-109639-A-1 MS
Matrix: Water
Analysis Batch: 255421

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
m,p-Xylene	ND		25.0	29.6		ug/L		119	70 - 133
o-Xylene	ND		25.0	29.5		ug/L		118	70 - 133
Toluene	ND		25.0	29.3		ug/L		117	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*80 - 128*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Lab Sample ID: 440-109639-A-1 MSD
Matrix: Water
Analysis Batch: 255421

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	28.9		ug/L		116	66 - 130	1	20
Ethylbenzene	ND		25.0	27.8		ug/L		111	70 - 130	1	20
m,p-Xylene	ND		25.0	29.5		ug/L		118	70 - 133	0	25
o-Xylene	ND		25.0	29.4		ug/L		118	70 - 133	0	20
Toluene	ND		25.0	29.4		ug/L		117	70 - 130	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*80 - 128*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*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

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

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
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
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	%Rec. Limits	RPD	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

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

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	%Rec. Limits	RPD	RPD Limit
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*

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	*MB %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*

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

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: 255649

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 14:26	1
C23-C40	ND		0.50		mg/L		05/18/15 07:38	05/18/15 14:26	1
C13 - C40	ND		0.50		mg/L		05/18/15 07:38	05/18/15 14:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*81*		*45 - 120*	*05/18/15 07:38*	*05/18/15 14:26*	*1*

Lab Sample ID: LCS 440-255651/2-A
Matrix: Water
Analysis Batch: 255649

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	0.579		mg/L		58	40 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*79*		*45 - 120*

Lab Sample ID: 440-109582-E-8-B MS
Matrix: Water
Analysis Batch: 255649

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	0.647		mg/L		66	40 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane	*86*		*45 - 120*

Lab Sample ID: 440-109582-G-8-C MSD
Matrix: Water
Analysis Batch: 255649

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	0.573		mg/L		58	40 - 120	12	30

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

Lab Sample ID: 440-109582-G-8-C MSD
Matrix: Water
Analysis Batch: 255649

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

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane	*77*		*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

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		
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
Sulfate	130		5.00	128	4	mg/L		24	80 - 120	1	20

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

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
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
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

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

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
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

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	%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	%Rec. Limits	RPD	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

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

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	%Rec. Limits	RPD	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

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	%Rec. Limits
Uranium	1000	975		ug/L		97	80 - 120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%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	%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	%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	%Rec. Limits	RPD	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	%Rec. Limits	RPD	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

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	%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	%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	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00909		mg/L		112	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-256185/2
Matrix: Water
Analysis Batch: 256185

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	10.0		4.0		mg/L			05/20/15 05:30	1
Bicarbonate ion as HCO3	12.2		4.8		mg/L			05/20/15 05:30	1
Carbonate as CO3	ND		2.4		mg/L			05/20/15 05:30	1
Hydroxide as OH	ND		1.4		mg/L			05/20/15 05:30	1

Lab Sample ID: 440-109585-1 DU
Matrix: Water
Analysis Batch: 256185

Client Sample ID: Newson-Windes
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	3300	B		3300		mg/L				0.3	20
Bicarbonate ion as HCO3	4000	B		4030		mg/L				0.3	20
Carbonate as CO3	ND			ND		mg/L				NC	20
Hydroxide as OH	ND			ND		mg/L				NC	20

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

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	*MB %Yield*	*MB 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*

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	*LCSD %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	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*108*		*40 - 110*	*05/14/15 16:44*	*06/04/15 11:44*	*1*
Y Carrier	*91.2*		*40 - 110*	*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	*LCS %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	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*
Y Carrier	*89.3*		*40 - 110*

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Analysis Batch: 254960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109584-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-109584-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-109585-1	Newson-Windes	Total/NA	Water	8260B	
LCS 440-254960/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-254960/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 255155

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1 - DL	Newson-Windes	Total/NA	Water	8260B	
440-109750-A-3 MS	Matrix Spike	Total/NA	Water	8260B	
440-109750-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-255155/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-255155/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 255421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-2	Travel Blank	Total/NA	Water	8260B	
440-109639-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-109639-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-255421/4	Lab Control Sample	Total/NA	Water	8260B	
MB 440-255421/3	Method Blank	Total/NA	Water	8260B	

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Prep Batch: 255077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	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
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

Analysis Batch: 255704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	Total/NA	Water	8270C SIM	255077

GC VOA

Analysis Batch: 255014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	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

Analysis Batch: 255649

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
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

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	
440-109585-1	Newson-Windes	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: 255966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	Total/NA	Water	8015B	255651

HPLC/IC

Analysis Batch: 254371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	Total/NA	Water	300.0	
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	Total/NA	Water	6020A	192621
440-110712-O-1-B MS	Matrix Spike	Total/NA	Water	6020A	192621

Metals (Continued)

Analysis Batch: 193592 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
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
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	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

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	
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	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
440-109585-1	Newson-Windes	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

QC Association Summary

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

TestAmerica Job ID: 440-109585-1
SDG: Newson-Windes Lease, Midway Sunset Oil Field

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	
440-109585-1	Newson-Windes	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: 256185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	Total/NA	Water	SM 2320B	
440-109585-1 DU	Newson-Windes	Total/NA	Water	SM 2320B	
LCS 440-256185/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-256185/2	Method Blank	Total/NA	Water	SM 2320B	

Rad

Prep Batch: 190808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	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	

Prep Batch: 190809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-109585-1	Newson-Windes	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	
440-109585-1	Newson-Windes	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	

Qualifiers

GC/MS Semi VOA

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

GC Semi VOA

Qualifier	Qualifier Description
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.

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.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.

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.
¤	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: 440-109585-1
SDG: Newson-Windes 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.

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other: **RWQCB Orders**

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jane McNaboe	Site Contact: Jane McNaboe	Date:	COC No:
EnviroTech Consultants, Inc.	Tel/Fax: 661-377-0073 X 11	Lab Contact: Janice Hsu	Carrier:	_____ of _____ COCs
5400 Rosedale Highway	Analysis Turnaround Time			Sampler:
Bakersfield, CA 93308	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(661) 377-0073 Phone	TAT if different from Below _____			Walk-in Client:
(661) 377-0074 FAX	☐ 2 weeks			Lab Sampling:
Project Name: RWQCB Pond Testing, 2015	☐ 1 week			
Site: Newson-Windes Lease, Midway Sunset Oil Field	☐ 2 days			Job / SDG No.:
P O # : BAL110	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	SM 2540C TDS	6010B CAM Metals	7470A Mercury (CVAA)	8260B BTEX	8015B C13-C22/C23-C40(Crude oil	PAH List 8270C SIM SVOC	300.0 Chloride, Bromide, Sulfate	300.0 Nitrate NO3	SM 2320B Alkalinity all forms ioni	9310 Gross Alpha	9315 Rad226	9320 Rad 228	6020A Uranium	Ra226_RA228	8015B C4 - C12, TPH	Travel Blank (1) 8260	Sample Specific Notes: See Attached
Newson-Windes	5/12/2015	0950		Water	20	N	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

00 5/13/15 9:45

440-109585 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: Please analyze the samples to meet the RWQCB requirements on the attached sheet. Please identify the 8015B resutls as crude oil.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 3.0 Corr'd: 1.8 Therm ID No.: 71

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by: Richard Thurber	Envirotech	5/12/15 @ 1525	Lathf		5/12/15 1525
Relinquished by: Lathf	Company:	Date/Time: 5/12/15 2020	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TA1	Date/Time: 05/12/15 20:50

Form No. CA-C-WI-002, Rev. 4.3, dated 12/05/2013

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9/11/2013

Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-109585-1
SDG Number: Newson-Windes Lease, Midway Sunset Oil Field

Login Number: 109585
List Number: 1
Creator: Blocker, Kristina M

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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 <6mm (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: 440-109585-1
SDG: Newson-Windes Lease, Midway Sunset Oil Field

Method: 9315 - Radium-226 (GFPC)

Matrix: Water **Prep Type: Total/NA**

		Percent Yield (Acceptance Limits)
		Ba
Lab Sample ID	Client Sample ID	(40-110)
440-109585-1	Newson-Windes	126 X
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)	
		Ba	Y
Lab Sample ID	Client Sample ID	(40-110)	(40-110)
440-109585-1	Newson-Windes	126 X	89.7
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