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

TAMARACK ENERGY, INC
RESPONSE TO RWQCB SECTION 13267 ORDER
POND INFORMATION AND SAMPLING RESULTS

CYMRIC OIL FIELD, BOWLES/CLIFFORD LEASES
SECTION 28, T29S/R21E MDB&M
SECTION 16, T29S/R21E MDB&M

8 June 2015

Prepared by:

EnviroTech Consultants, Inc.

M. Jane Ellis-McNaboe

M. Jane Ellis-McNaboe, PG

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

June 9, 2015

Certification Statement

RWQCB Order 13267, Pond Sampling Technical Report
Tamarack Energy Inc. Operator, Clifford and Bowles Leases

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.

President Tamarack Energy Inc.

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1.0 IDENTIFICATION OF DISCHARGES OF PRODUCED WATER TO LAND

Three ponds were identified by the RWQCB containing discharges of produced water. A map of the ponds and surrounding leases are included as Attachment A.

2.0 POND SAMPLING

Representative samples of wastewater were collected by EnviroTech Consultants, Inc. (EnviroTech) from the ponds on April 10, 2015 as required by Order 13267 dated April 1, 2015 (Attachment B). The Bowles ponds are in series, so only one data sample is needed. The samples were decanted from the sample port on the wastewater tank into appropriate sampling containers and cooled with ice for storage and transportation to the laboratory under standard chain of custody procedures.

3.0 POND SAMPLING ANALYTICAL RESULTS

The samples were received by Test America Laboratories, Inc. on April 10, 2015. EnviroTech received the laboratory analytical report on May 14, 2015. The analytical results are summarized in the following tables; complete laboratory reports are included in Attachment C.

Table 3-1: General Chemistry

Sample ID	Date Sampled	Total Dissolved Solids	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Strontium	Alkalinity as 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													
Clifford	4/10/2015	**11,000**	**95**	**0.6**	**110**	<0.10	**33**	**4,100**	**16**	**2,000**	**2,400**	<2.4	<1.4
Bowles	4/10/2015	**17,000**	**130**	**32**	**99**	**0.20**	**130**	**5,900**	**14**	**2,400**	**2,900**	<2.4	<1.4

Bold = Analyte detected at or above minimum reporting limit.
N/A - Not analyzed for this compound.

Table 3-2: Anions

Sample ID	Date Sampled	Anions, Ion Chromatography			
		Bromide	Chloride	Nitrate as NO3	Sulfate
EPA Analytical Method		300_ORGFM_28D		300_ORGFMS	300_ORGFM_28D
Units		mg/L			
Reporting Limit		Reporting limit varies, see full analytical report.			
Clifford	4/10/2015	**55**	**5,300**	<10	<10
Bowles	4/10/2015	**110**	**7,600**	<10	<10

Bold = Analyte detected at or above minimum reporting limit.

Table 3-3: Metals

Sample ID	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium	Cobalt	Copper	Lead
EPA Analytical Method		6010B									
Units		mg/L									
Reporting Limit		Reporting limit varies by sample. See full analytical report.									
Clifford	4/10/2015	<0.050	<0.050	**37**	<0.010	**70**	<0.025	<0.025	<0.050	<0.050	<0.025
Bowles	4/10/2015	<0.050	<0.050	**25**	<0.010	**90**	<0.025	<0.025	<0.050	<0.050	<0.025

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 values by sample. See full analytical report.									
Clifford	4/10/2015	**1.6**	<0.10	<0.050	<0.050	<0.050	**16**	<0.050	<0.050	<0.10	<0.00020
Bowles	4/10/2015	**2.0**	<0.10	<0.050	<0.050	<0.050	**14**	<0.050	<0.050	<0.10	<0.00020

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: Gasoline and Diesel Range Organics (GC)		
						C4 - C12	C13-C22	C23-C40
EPA Analytical Method		8015B-GRO					8015B_DRO	
Units		ug/L				ug/L	mg/L	
Reporting Limit		Varies, see laboratory report					0.48	
Clifford	4/10/2015	<2.0	<2.0	<2.0	<2.0	**87**	**4.4**	**4.7**
Bowles	4/10/2015	<2.0	**2.2**	<2.0	**13**	**210**	**1.7**	**0.88**

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															
Clifford	4/10/2015	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96	<0.96
Bowles	4/10/2015	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19

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

Table 3-6: Radionuclides

Sample ID	Date Sampled	Gross Alpha	Radium-226	Radium-228	Uranium
EPA Analytical Method		9310	9315_Ra226	9320_Ra228	6020A
Units		pCi/L			
Regulatory Threshold*		15	- -	5	20
Clifford	4/10/2015	66.6±87.4	27±2.58	**6.5±0.993**	<3.4
Bowles	4/10/2015	66.8±129	11.8±1.22	**6.21±0.99**	<3.4

Bold = Analyte detected at or above minimum reporting limit.
Reporting limit varies by sample. See full analytical report.
* Title 22, Table 64442 MCL
Radionuclides are ± total uncertainty
-- No Regulatory Threshold

4.0 INFORMATION FOR EACH SURFACE IMPOUNDMENT

The following table contains the required information for the Tamarack Energy, Inc, Bowles and Clifford Ponds. Tamarack acquired the leases in April 2011; the ponds were on the leases at that time. Tamarack does not know the history of the ponds prior to 2011.

Table 4-1: Surface Impoundment Information

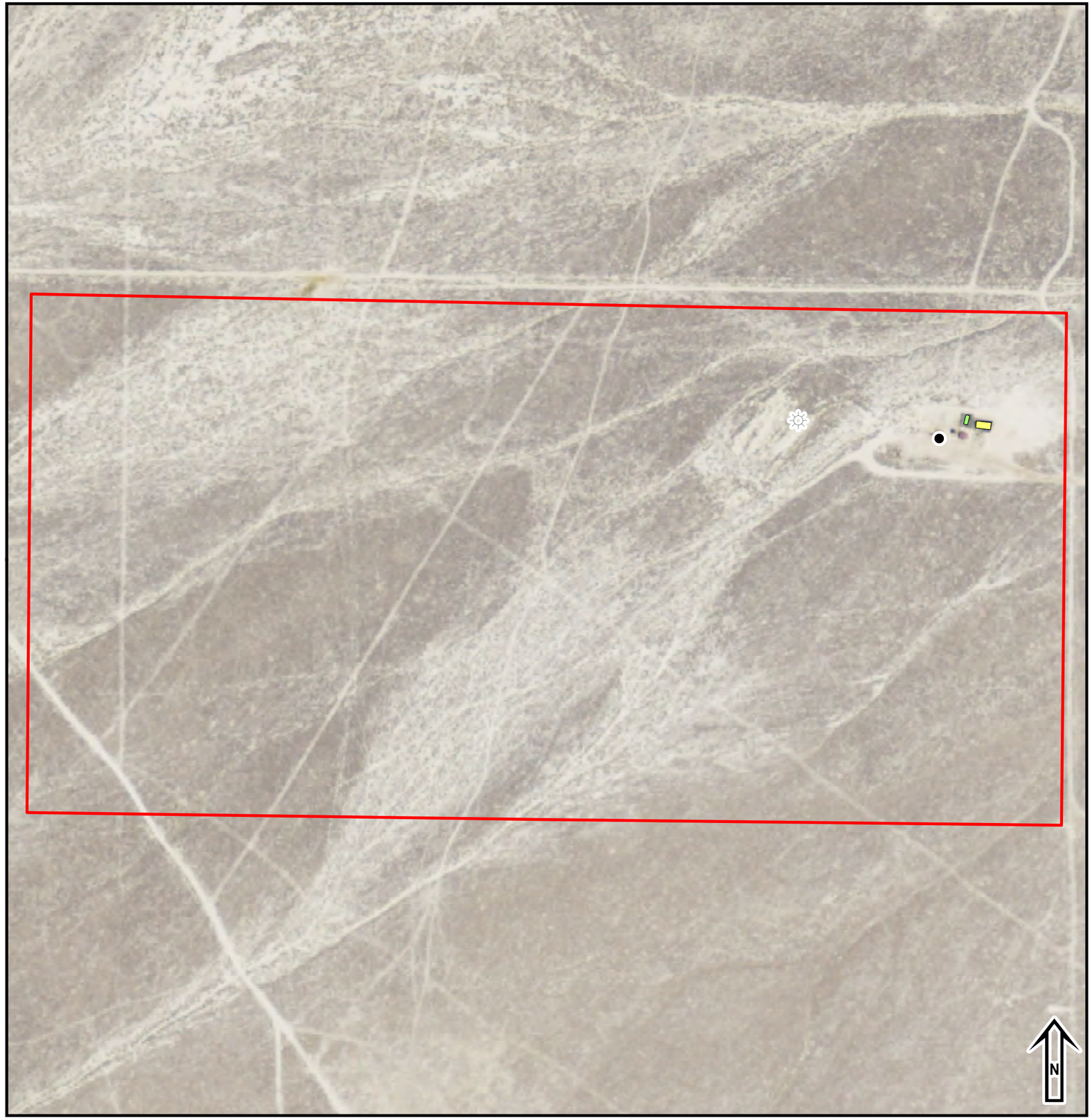
Lease	Surface Impoundment Dimensions (feet)			Location (NAD 83)	Assessor's Parcel Number of the Lease	Duration of discharge (months/ year)	Approximate volume of wastewater discharged per year (BBLS)
Bowles	Length	Width	Depth	Latitude: 35.37855°	098-170-02	6	91.3
	18'	38'	11'	Longitude:-119.714240°			
	Length	Width	Depth	Latitude: 35.37856°	098-170-02	6	91.3
	10'	24'	10'	Longitude:-119.714241°			
Clifford	Length	Width	Depth	Latitude: 35.409620°	098-141-32	12	15,466
	57'	30'	8'	Longitude:-119.723840°			

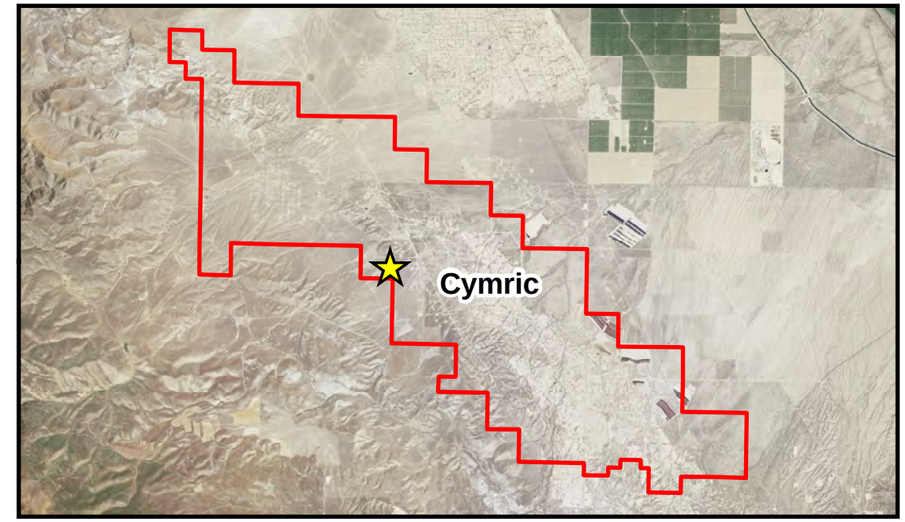
ATTACHMENT A

TAMARACK ENERGY, INC

BOWLES AND CLIFFORD PONDS MAPS

Tamarack Energy, Inc.





Legend

Bowles Lease

Bowles Ponds

Pond #1 (9ft Deep)

Pond #2 (9ft Deep)

DOGGR Wells

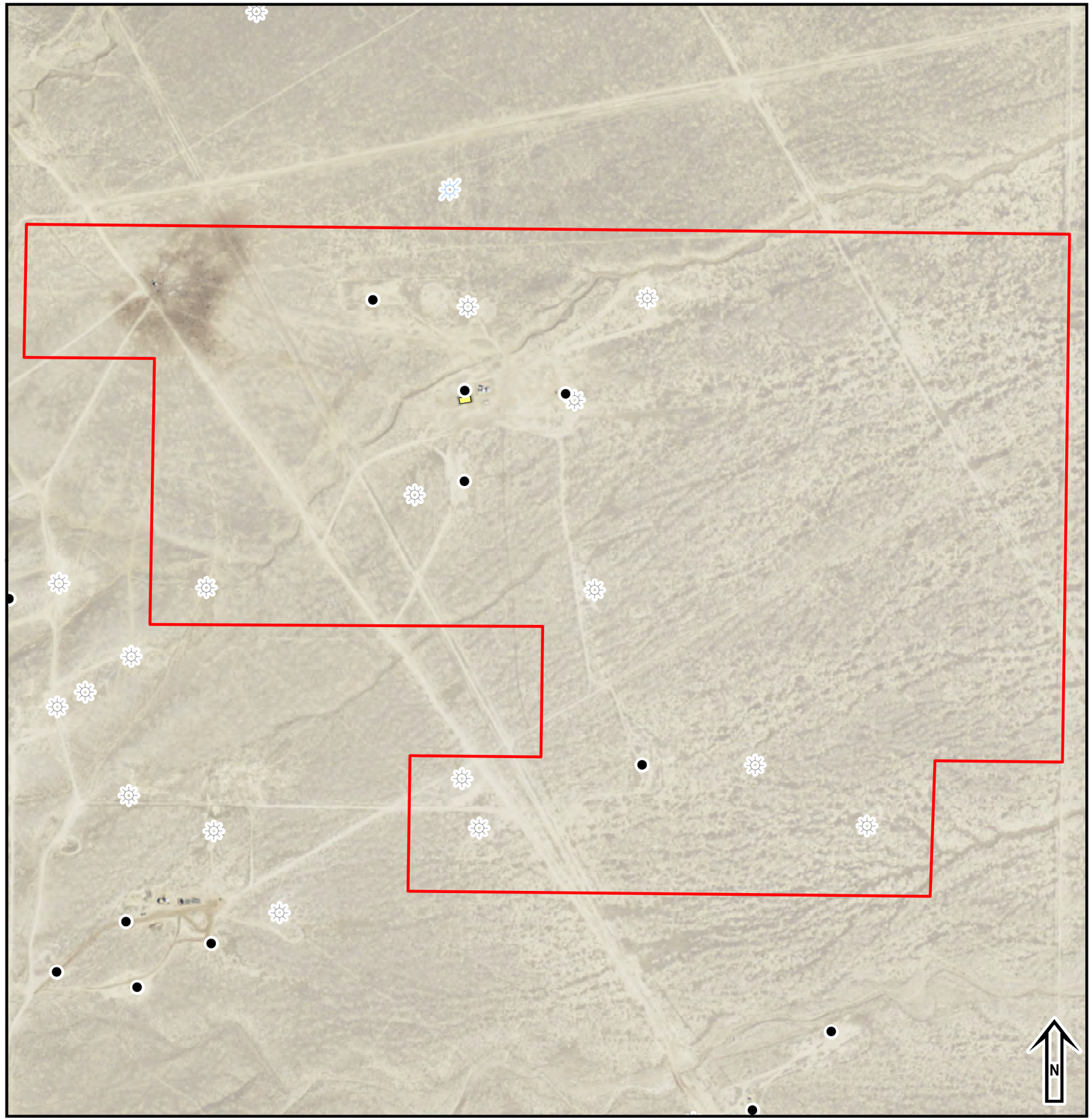
Active Oil & Gas

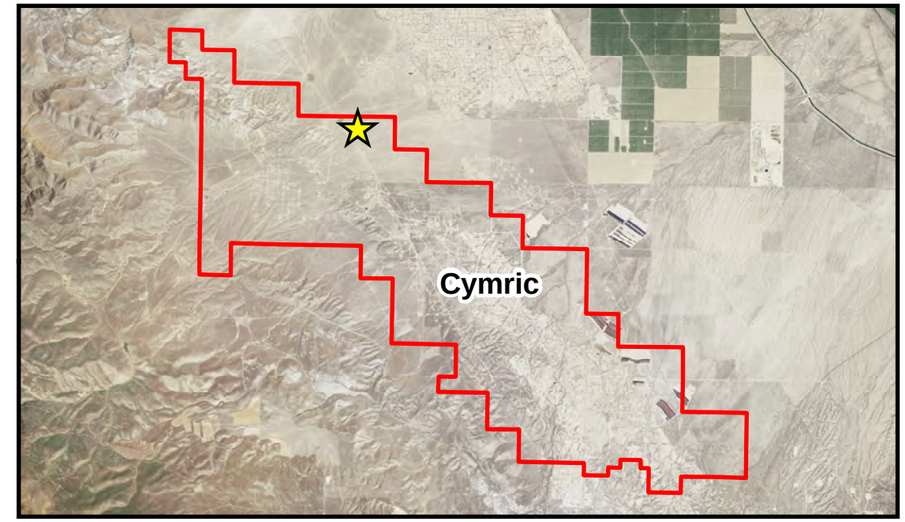
Plugged Oil & Gas

0 0.05 0.1 0.2 Miles

Prepared By: EnviroTech Consultants, Inc.	TITLE:	Bowles Pond
	FIELD:	Cymric Oil Field
	COUNTY:	Kern
Section/Township/Range	DRN BY:	Ashley Bylow
T29S/R21E - Sections 28	DATE:	May 21, 2015
	SCALE:	1:3,200

Tamarack Energy, Inc.





Legend

CliffordLease

Clifford Pond (6ft Deep)

DOGGR Wells

Active Oil & Gas

Plugged Oil & Gas

Plugged Steam Flood

0 0.1 0.2 0.4 Miles

Prepared By: EnviroTech Consultants, Inc.	TITLE:	Clifford Pond
	FIELD:	Cymric Oil Field
	COUNTY:	Kern
Section/Township/Range	DRN BY:	Ashley Bylow
T29S/R21E - Section 16	DATE:	May 22, 2015
	SCALE:	1:6,350

ATTACHMNENT B

TAMARACK ENERGY, 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

Brad Califf
Tamarack Energy, Inc.
2112 Lone Tree Court
Bakersfield, CA 93312

CERTIFIED MAIL
7014 3490 0001 7023 0735

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

Tamarack Energy, 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:

APR 06 2015

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

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

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

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

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

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

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

   A. Identification of any discharges of oil field produced waters to land, including but not limited to ponds, since April of 2014 that are not listed in Attachment A;

   B. Collect representative samples of wastewater within each of the ponds. Samples must be analyzed in accordance with the water quality analysis and reporting requirements contained in Attachment B to this Order;[1]

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

   C. All available information for each of the surface impoundment(s), including dimensions (i.e., length, width, and depth), latitude and longitude, Assessor's Parcel Numbers of the lease, duration of the discharge (in months), and the volume of wastewater discharged per year.

   D. A location map that includes the following information:

      i. All surface impoundment(s) at the Facility,
      ii. Include the boundary lines for all leases at the Facility, and
      iii. Legend with the name of the surface impoundment(s).

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

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

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

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

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

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

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

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

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

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

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

California Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 days after the date of this directive, except that if the thirtieth day following the date of this directive falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

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

Clay L. Rodgers

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
Tamarack Energy, Inc.	Cymric	Bowles	2
		Clifford Trust	1

ATTACHMENT B

Water Quality Analysis

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

A. Total dissolved solids;

B. Metals listed in California Code of Regulations, title 22, section 66261.24. subdivision (a)(2)(A);

C. Benzene, toluene, ethylbenzene, and xylenes;

D. Total petroleum hydrocarbons as crude oil;

E. Polynuclear aromatic hydrocarbons (including acenaphthene, acenaphthylene, anthracene, benzo[a]anthracene, benzo[b]fluoranthene, benzo[a]pyrene, benzo[g,h,i]perylene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorine, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene, and pyrene);

F. Radionuclides listed under California Code of Regulations, title 22, Table 64442;

G. Major and minor cations (including sodium, potassium, magnesium, and calcium);

H. Major and minor anions (including nitrate, chloride, sulfate, carbonate, bicarbonate, and bromide);

I. Trace elements (including lithium, strontium, boron, iron, and manganese).

Reporting Requirements

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

A. Site plan(s) with the location(s) of where the samples were collected;

B. A description of how the samples, representative of the pond contents, were collected;

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

ATTACHMENT C

TAMARACK ENERGY, 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: 440-106779-1
TestAmerica SDG: Tamarack, Clifford and Bowles Leases
Client Project/Site: RWQCB Pond Testing, 2015
Revision: 2

For:
Envirotech Consultants, Inc.
5400 Rosedale Highway
Bakersfield, California 93308

Attn: Jane McNaboe

Authorized for release by:
5/19/2015 1:48:25 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-106779-1	Clifford	Water	04/10/15 09:00	04/10/15 18:55
440-106779-2	Bowles	Water	04/10/15 09:25	04/10/15 18:55

Job ID: 440-106779-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-106779-1

Comments
Revised report to report results in pCi/L for Uranium.

Receipt
The samples were received on 4/10/2015 6:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.6º C and 2.8º C.

GC/MS VOA
Method(s) 8260B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH=7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: Clifford (440-106779-1), Bowles (440-106779-2), (440-106779-B-1 MS) and (440-106779-B-1 MSD).

Method(s) 8260B: The following volatile samples was received and analyzed with significant headspace in the sample vial(s): Bowles (440-106779-2). 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: The internal standard response was below the 200% maximum QC limit for the following samples: Bowles (440-106779-2) . 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 low.

Method(s) 8270C SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with 248764. The LCS was performed in duplicate to provide precision for the batch.

Method(s) 8270C SIM: The following sample was diluted due to the nature of the sample matrix: Clifford (440-106779-1). 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 volatile sample was analyzed with significant headspace in the sample vial(s):sample received with head space Bowles (440-106779-2). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8015B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible:ph be found 7 Clifford (440-106779-1).

Method(s) 8015B: The following volatile sample was analyzed with significant headspace in the sample vial(s): Clifford (440-106779-1). Significant headspace is defined as a bubble greater than 6 mm in diameter. Sample arrived with headspace.

HPLC/IC
Method(s) 300.0: The following samples was diluted for fluoride and sulfate due to the nature of the sample matrix: Clifford (440-106779-1) and Bowles (440-106779-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples was diluted for nitrate due to the nature of the sample matrix: Clifford (440-106779-1) and Bowles (440-106779-2). 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 Semi VOA

Job ID: 440-106779-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with 248474. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch. (LCS 440-248474/2-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 following samples was diluted due to the nature of the sample matrix: Clifford (440-106779-1) and Bowles (440-106779-2). 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 batch 248961 contained alkalinity above the reporting limit (RL). Associated samples were 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
440-106779-2

Comments
No additional comments.

Receipt
The samples were received on 4/10/2015 6:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.6º C and 2.8º C.

RAD
Method(s) 9310: Gross alpha/beta Batch: 189677
The gross alpha and/or 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: Clifford (440-106779-1), Bowles (440-106779-2), (160-11454-A-1-B) and (160-11454-A-1-H DU). Analytical results are reported with the detection limit achieved.

Method(s) 903.0, 9315: Radium-226 Batch: 185656
The barium carrier recovery is outside the upper control limit of 110% (115%) for the following sample: 160-11297-B-1-A. There was physical evidence of matrix interference apparent during the initial preparation of the sample (milky, white color). The QC samples associated with the batch have acceptable carrier recoveries, further indicating the presence of matrix interference. The samples associated with the batch have been truncated to 100% to reduce any potential bias a high carrier recovery may have: Clifford (440-106779-1), Bowles (440-106779-2), (LCS 160-185656/2-A), (MB 160-185656/1-A), (480-78091-A-2-A) and (480-78091-C-2-A DU).

Method(s) 904.0, 9320: Radium-228 Batch: 185657
The barium carrier recovery is outside the upper control limit of 110% (115%) for the following sample: 160-11297-B-1-B. There was physical evidence of matrix interference apparent during the initial preparation of the sample (see prep NCMs 54440, and 55848). The QC samples associated with the batch have acceptable carrier recoveries, further indicating the presence of matrix interference. The samples associated with the batch have been truncated to 100% to reduce any potential bias a high carrier recovery may have. The data have been qualified and reported. Clifford (440-106779-1), Bowles (440-106779-2), (LCS 160-185657/2-A), (MB 160-185657/1-A), (480-78091-A-2-B)

Job ID: 440-106779-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

and (480-78091-C-2-B DU)

Method(s) PrecSep-21, PrecSep_0: radium-228 batch #185657 and radium-226 batch #185656
The following samples were run at reduced aliquots:Clifford (440-106779-1) and Bowles (440-106779-2).
160-11297-1 was reduced to 250 mL because it was a milky, white color.
440-106779-1, -2, 440-106783-1, 440-106784-1, -2, and -3 were reduced to 500 mL because the insides of the bottles had an oily substance stuck to them. The sample were also a yellowish color and had a strange odor.

Method(s) PrecSep-21, PrecSep_0: radium-228 batch #185657 and radium-226 batch #185656
The barium carrier recovery is outside the upper control limit (110%) for the following samples: Clifford (440-106779-1) and Bowles (440-106779-2). The recoveries were 160-11297-1 (114.749%), 440-106779-1 (163.126%), and 440-106779-2 (132.743%). There was physical evidence of matrix interference apparent during the initial preparation of the sample (NCM #54440). The QC samples associated with the batch have acceptable carrier recovery indicating the presence of matrix interference.

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

Metals
Method(s) 6020A: 185876 - water. A-batch - 186366.

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: Clifford (440-106779-1), Bowles (440-106779-2), (440-106779-R-1-B MS), (440-106779-R-1-C MSD) and (440-106779-R-1-A SD). Elevated reporting limits (RLs) are provided.

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

Client Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Clifford

Date Collected: 04/10/15 09:00
Date Received: 04/10/15 18:55

Lab Sample ID: 440-106779-1

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			04/15/15 10:40	1
Ethylbenzene	ND		2.0		ug/L			04/15/15 10:40	1
m,p-Xylene	ND		2.0		ug/L			04/15/15 10:40	1
o-Xylene	ND		2.0		ug/L			04/15/15 10:40	1
Toluene	ND		2.0		ug/L			04/15/15 10:40	1
Xylenes, Total	ND		2.0		ug/L			04/15/15 10:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*114*		*80 - 128*		*04/15/15 10:40*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*04/15/15 10:40*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*04/15/15 10:40*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Acenaphthylene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Anthracene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Benzo[a]anthracene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Benzo[a]pyrene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Benzo[b]fluoranthene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Benzo[g,h,i]perylene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Benzo[k]fluoranthene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Chrysene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Dibenz(a,h)anthracene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Fluoranthene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Fluorene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Indeno[1,2,3-cd]pyrene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Naphthalene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Phenanthrene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5
Pyrene	ND		0.96		ug/L		04/14/15 12:07	04/16/15 11:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*31 - 120*	*04/14/15 12:07*	*04/16/15 11:39*	*5*
Nitrobenzene-d5	*70*		*25 - 133*	*04/14/15 12:07*	*04/16/15 11:39*	*5*
Terphenyl-d14	*98*		*10 - 120*	*04/14/15 12:07*	*04/16/15 11:39*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**87**		50		ug/L			04/15/15 06:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*65 - 140*		*04/15/15 06:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	**4.4**		0.47		mg/L		04/13/15 11:33	04/14/15 23:11	1
C23-C40	**4.7**		0.47		mg/L		04/13/15 11:33	04/14/15 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*66*		*45 - 120*	*04/13/15 11:33*	*04/14/15 23:11*	*1*

Client Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Clifford

Date Collected: 04/10/15 09:00
Date Received: 04/10/15 18:55

Lab Sample ID: 440-106779-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**55**		10		mg/L			04/11/15 14:32	20
Nitrate as NO3	ND		10		mg/L			04/11/15 14:32	20
Chloride	**5300**		1000		mg/L			04/13/15 16:33	2000
Sulfate	ND		10		mg/L			04/11/15 14:32	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Arsenic	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Barium	**37**		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Beryllium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 22:17	5
Boron	**70**		0.25		mg/L		04/15/15 11:00	04/15/15 22:17	5
Cadmium	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:17	5
Calcium	**95**		0.50		mg/L		04/15/15 11:00	04/15/15 22:17	5
Chromium	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:17	5
Cobalt	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Copper	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Iron	**0.63**		0.20		mg/L		04/15/15 11:00	04/15/15 22:17	5
Lead	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:17	5
Lithium	**1.6**		0.050		mg/L		04/15/15 11:00	04/15/15 17:36	1
Magnesium	**110**		0.10		mg/L		04/15/15 11:00	04/15/15 22:17	5
Manganese	ND		0.10		mg/L		04/15/15 11:00	04/15/15 22:17	5
Molybdenum	ND		0.10		mg/L		04/15/15 11:00	04/15/15 22:17	5
Nickel	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Potassium	**33**		2.5		mg/L		04/15/15 11:00	04/15/15 22:17	5
Selenium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Silver	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Sodium	**4100**		5.0		mg/L		04/15/15 11:00	04/16/15 11:43	10
Strontium	**16**		0.10		mg/L		04/15/15 11:00	04/15/15 22:17	5
Thallium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Vanadium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:17	5
Zinc	ND		0.10		mg/L		04/15/15 11:00	04/15/15 22:17	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<5.0		5.0	1.2	ug/L		04/15/15 14:18	04/17/15 01:54	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<3.4		3.4	0.77	pCi/L		04/15/15 14:18	04/17/15 01:54	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/14/15 14:08	04/14/15 20:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**11000**		200		mg/L			04/15/15 09:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**2000**		4.0		mg/L			04/13/15 13:29	1
Bicarbonate ion as HCO3	**2400**		4.8		mg/L			04/13/15 13:29	1
Carbonate as CO3	ND		2.4		mg/L			04/13/15 13:29	1

Client Sample ID: Clifford

Lab Sample ID: 440-106779-1
Date Collected: 04/10/15 09:00
Matrix: Water
Date Received: 04/10/15 18:55

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide as OH	ND		1.4		mg/L			04/13/15 13:29	1

Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	66.6	U G	87.4	87.7	146	pCi/L	05/06/15 13:40	05/10/15 19:30	1
Gross Beta	**63.1**	**G**	35.4	36.0	52.9	pCi/L	05/06/15 13:40	05/10/15 19:30	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**27.0**		0.848	2.58	0.107	pCi/L	04/14/15 14:14	05/06/15 06:55	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*04/14/15 14:14*	*05/06/15 06:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**6.50**		0.792	0.993	0.681	pCi/L	04/14/15 14:00	04/30/15 11:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*04/14/15 14:00*	*04/30/15 11:14*	*1*
Y Carrier	*91.2*		*40 - 110*	*04/14/15 14:00*	*04/30/15 11:14*	*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	**33.53**		1.16	2.764	0.681	pCi/L		05/06/15 22:46	1

Client Sample ID: Bowles

Lab Sample ID: 440-106779-2
Date Collected: 04/10/15 09:25
Matrix: Water
Date Received: 04/10/15 18:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			04/15/15 12:09	1
Ethylbenzene	**2.2**		2.0		ug/L			04/15/15 12:09	1
m,p-Xylene	**9.1**		2.0		ug/L			04/15/15 12:09	1
o-Xylene	**3.9**		2.0		ug/L			04/15/15 12:09	1
Toluene	ND		2.0		ug/L			04/15/15 12:09	1
Xylenes, Total	**13**		2.0		ug/L			04/15/15 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*04/15/15 12:09*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*04/15/15 12:09*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*04/15/15 12:09*	*1*

Client Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Acenaphthylene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Anthracene	ND	*	0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Benzo[a]anthracene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Benzo[a]pyrene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Benzo[b]fluoranthene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Benzo[g,h,i]perylene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Benzo[k]fluoranthene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Chrysene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Dibenz(a,h)anthracene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Fluoranthene	ND	*	0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Fluorene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Indeno[1,2,3-cd]pyrene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Naphthalene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Phenanthrene	ND	*	0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1
Pyrene	ND		0.19		ug/L		04/14/15 12:07	04/16/15 09:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*31 - 120*	*04/14/15 12:07*	*04/16/15 09:29*	*1*
Nitrobenzene-d5	*70*		*25 - 133*	*04/14/15 12:07*	*04/16/15 09:29*	*1*
Terphenyl-d14	*94*		*10 - 120*	*04/14/15 12:07*	*04/16/15 09:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**210**		50		ug/L			04/14/15 20:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*65 - 140*		*04/14/15 20:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	**1.7**		0.47		mg/L		04/13/15 11:33	04/14/15 23:50	1
C23-C40	**0.88**		0.47		mg/L		04/13/15 11:33	04/14/15 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*61*		*45 - 120*	*04/13/15 11:33*	*04/14/15 23:50*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**110**		10		mg/L			04/11/15 14:47	20
Nitrate as NO3	ND		10		mg/L			04/11/15 14:47	20
Chloride	**7600**		1000		mg/L			04/13/15 16:48	2000
Sulfate	ND		10		mg/L			04/11/15 14:47	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Arsenic	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Barium	**25**		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Beryllium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 22:20	5
Boron	**90**		0.25		mg/L		04/15/15 11:00	04/15/15 22:20	5
Cadmium	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:20	5
Calcium	**130**		0.50		mg/L		04/15/15 11:00	04/15/15 22:20	5
Chromium	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:20	5
Cobalt	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5

Client Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Bowles

Date Collected: 04/10/15 09:25
Date Received: 04/10/15 18:55

Lab Sample ID: 440-106779-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Iron	**32**		0.20		mg/L		04/15/15 11:00	04/15/15 22:20	5
Lead	ND		0.025		mg/L		04/15/15 11:00	04/15/15 22:20	5
Lithium	**2.0**		0.050		mg/L		04/15/15 11:00	04/15/15 17:39	1
Magnesium	**99**		0.10		mg/L		04/15/15 11:00	04/15/15 22:20	5
Manganese	**0.20**		0.10		mg/L		04/15/15 11:00	04/15/15 22:20	5
Molybdenum	ND		0.10		mg/L		04/15/15 11:00	04/15/15 22:20	5
Nickel	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Potassium	**130**		2.5		mg/L		04/15/15 11:00	04/15/15 22:20	5
Selenium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Silver	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Sodium	**5900**		5.0		mg/L		04/15/15 11:00	04/16/15 11:46	10
Strontium	**14**		0.10		mg/L		04/15/15 11:00	04/15/15 22:20	5
Thallium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Vanadium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 22:20	5
Zinc	ND		0.10		mg/L		04/15/15 11:00	04/15/15 22:20	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<5.0		5.0	1.2	ug/L		04/15/15 14:18	04/17/15 02:21	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<3.4		3.4	0.77	pCi/L		04/15/15 14:18	04/17/15 02:21	10

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/14/15 14:08	04/14/15 20:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**17000**		200		mg/L			04/15/15 09:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**2400**	**B**	4.0		mg/L			04/15/15 06:56	1
Bicarbonate ion as HCO3	**2900**	**B**	4.8		mg/L			04/15/15 06:56	1
Carbonate as CO3	ND		2.4		mg/L			04/15/15 06:56	1
Hydroxide as OH	ND		1.4		mg/L			04/15/15 06:56	1

Method: 9310 - Gross Alpha / Beta (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	66.8	U G	129	129	224	pCi/L	05/06/15 13:40	05/10/15 19:30	1
Gross Beta	58.7	U G	44.7	45.1	69.8	pCi/L	05/06/15 13:40	05/10/15 19:30	1

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**11.8**		0.603	1.22	0.136	pCi/L	04/14/15 14:14	05/06/15 06:55	1

Client Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Bowles

Date Collected: 04/10/15 09:25
Date Received: 04/10/15 18:55

Lab Sample ID: 440-106779-2

Matrix: Water

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.9*		*40 - 110*	*04/14/15 14:14*	*05/06/15 06:55*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	**6.21**		0.808	0.990	0.755	pCi/L	04/14/15 14:00	04/30/15 11:14	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*96.9*		*40 - 110*	*04/14/15 14:00*	*04/30/15 11:14*	*1*
Y Carrier	*90.1*		*40 - 110*	*04/14/15 14:00*	*04/30/15 11:14*	*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	**18.05**		1.01	1.571	0.755	pCi/L		05/06/15 22:46	1

Method Summary

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

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: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Clifford

Lab Sample ID: 440-106779-1
Matrix: Water

Date Collected: 04/10/15 09:00
Date Received: 04/10/15 18:55

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	248967	04/15/15 10:40	AL	TAL IRV
Total/NA	Prep	3520C			1040 mL	1 mL	248764	04/14/15 12:07	AK	TAL IRV
Total/NA	Analysis	8270C SIM		5	1040 mL	1 mL	249256	04/16/15 11:39	AI	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	248804	04/15/15 06:29	IM	TAL IRV
Total/NA	Prep	3510C			1055 mL	1 mL	248474	04/13/15 11:33	AP	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	248684	04/14/15 23:11	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		248306	04/11/15 14:32	NN	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		248307	04/11/15 14:32	NN	TAL IRV
Total/NA	Analysis	300.0		2000	5 mL		248479	04/13/15 16:33	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249171	04/15/15 17:36	TK	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		5	25 mL	25 mL	249251	04/15/15 22:17	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		10	25 mL	25 mL	249323	04/16/15 11:43	VS	TAL IRV
Total/NA	Prep	3010A			50 mL	50 mL	185876	04/15/15 14:18	DAS	TAL SL
Total/NA	Analysis	6020A		10	50 mL	50 mL	186366	04/17/15 01:54	CCB	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	248801	04/14/15 14:08	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	248927	04/14/15 20:19	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1			248644	04/13/15 13:29	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	248991	04/15/15 09:42	XL	TAL IRV
Total/NA	Prep	Evaporation			4 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	4 mL		190172	05/10/15 19:30	RTM	TAL SL
Total/NA	Prep	PrecSep-21			505.51 mL	1.0 g	185656	04/14/15 14:14	LEM	TAL SL
Total/NA	Analysis	9315		1	505.51 mL		189645	05/06/15 06:55	MLK	TAL SL
Total/NA	Prep	PrecSep_0			505.51 mL	1.0 g	185657	04/14/15 14:00	LEM	TAL SL
Total/NA	Analysis	9320		1	505.51 mL		188799	04/30/15 11:14	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			189803	05/06/15 22:46	RTM	TAL SL

Client Sample ID: Bowles

Lab Sample ID: 440-106779-2
Matrix: Water

Date Collected: 04/10/15 09:25
Date Received: 04/10/15 18:55

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	248967	04/15/15 12:09	AL	TAL IRV
Total/NA	Prep	3520C			1040 mL	1 mL	248764	04/14/15 12:07	AK	TAL IRV
Total/NA	Analysis	8270C SIM		1	1040 mL	1 mL	249256	04/16/15 09:29	AI	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	248804	04/14/15 20:47	IM	TAL IRV
Total/NA	Prep	3510C			1055 mL	1 mL	248474	04/13/15 11:33	AP	TAL IRV
Total/NA	Analysis	8015B		1	1055 mL	1 mL	248684	04/14/15 23:50	KW	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		248306	04/11/15 14:47	NN	TAL IRV
Total/NA	Analysis	300.0		20	5 mL		248307	04/11/15 14:47	NN	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Client Sample ID: Bowles

Date Collected: 04/10/15 09:25
Date Received: 04/10/15 18:55

Lab Sample ID: 440-106779-2

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	300.0		2000	5 mL		248479	04/13/15 16:48	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		1	25 mL	25 mL	249171	04/15/15 17:39	TK	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		5	25 mL	25 mL	249251	04/15/15 22:20	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	249024	04/15/15 11:00	ND	TAL IRV
Total Recoverable	Analysis	6010B		10	25 mL	25 mL	249323	04/16/15 11:46	VS	TAL IRV
Total/NA	Prep	3010A			50 mL	50 mL	185876	04/15/15 14:18	DAS	TAL SL
Total/NA	Analysis	6020A		10	50 mL	50 mL	186366	04/17/15 02:21	CCB	TAL SL
Total/NA	Prep	7470A			20 mL	20 mL	248801	04/14/15 14:08	DB	TAL IRV
Total/NA	Analysis	7470A		1	20 mL	20 mL	248927	04/14/15 20:16	EN	TAL IRV
Total/NA	Analysis	SM 2320B		1	25.0 mL	25 mL	248961	04/15/15 06:56	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	5 mL	100 mL	248991	04/15/15 09:42	XL	TAL IRV
Total/NA	Prep	Evaporation			3 mL	1.0 g	189677	05/06/15 13:40	SCB	TAL SL
Total/NA	Analysis	9310		1	3 mL		190172	05/10/15 19:30	RTM	TAL SL
Total/NA	Prep	PrecSep-21			501.34 mL	1.0 g	185656	04/14/15 14:14	LEM	TAL SL
Total/NA	Analysis	9315		1	501.34 mL		189645	05/06/15 06:55	MLK	TAL SL
Total/NA	Prep	PrecSep_0			501.34 mL	1.0 g	185657	04/14/15 14:00	LEM	TAL SL
Total/NA	Analysis	9320		1	501.34 mL		188799	04/30/15 11:14	MLK	TAL SL
Total/NA	Analysis	Ra226_Ra228		1			189803	05/06/15 22:46	RTM	TAL SL

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 440-248967/4
Matrix: Water
Analysis Batch: 248967

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			04/15/15 09:28	1
Ethylbenzene	ND		2.0		ug/L			04/15/15 09:28	1
m,p-Xylene	ND		2.0		ug/L			04/15/15 09:28	1
o-Xylene	ND		2.0		ug/L			04/15/15 09:28	1
Toluene	ND		2.0		ug/L			04/15/15 09:28	1
Xylenes, Total	ND		2.0		ug/L			04/15/15 09:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 128*		*04/15/15 09:28*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*04/15/15 09:28*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*04/15/15 09:28*	*1*

Lab Sample ID: LCS 440-248967/5
Matrix: Water
Analysis Batch: 248967

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	24.1		ug/L		96	68 - 130
Ethylbenzene	25.0	22.8		ug/L		91	70 - 130
m,p-Xylene	25.0	25.1		ug/L		101	70 - 130
o-Xylene	25.0	24.9		ug/L		99	70 - 130
Toluene	25.0	22.5		ug/L		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-106779-1 MS
Matrix: Water
Analysis Batch: 248967

Client Sample ID: Clifford
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	24.0		ug/L		96	66 - 130
Ethylbenzene	ND		25.0	22.6		ug/L		90	70 - 130
m,p-Xylene	ND		25.0	24.4		ug/L		98	70 - 133
o-Xylene	ND		25.0	24.1		ug/L		96	70 - 133
Toluene	ND		25.0	22.2		ug/L		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

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

Lab Sample ID: 440-106779-1 MSD
Matrix: Water
Analysis Batch: 248967

Client Sample ID: Clifford
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	24.1		ug/L		96	66 - 130	0	20
Ethylbenzene	ND		25.0	23.6		ug/L		95	70 - 130	5	20
m,p-Xylene	ND		25.0	25.6		ug/L		102	70 - 133	5	25
o-Xylene	ND		25.0	24.6		ug/L		98	70 - 133	2	20
Toluene	ND		25.0	23.1		ug/L		92	70 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*80 - 128*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

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

Lab Sample ID: MB 440-248764/1-A
Matrix: Water
Analysis Batch: 249132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248764

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Acenaphthylene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Anthracene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Benzo[a]anthracene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Benzo[a]pyrene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Benzo[b]fluoranthene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Benzo[g,h,i]perylene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Benzo[k]fluoranthene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Chrysene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Dibenz(a,h)anthracene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Fluoranthene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Fluorene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Indeno[1,2,3-cd]pyrene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Naphthalene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Phenanthrene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1
Pyrene	ND		0.20		ug/L		04/14/15 12:07	04/16/15 00:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*81*		*31 - 120*	*04/14/15 12:07*	*04/16/15 00:21*	*1*
Nitrobenzene-d5	*75*		*25 - 133*	*04/14/15 12:07*	*04/16/15 00:21*	*1*
Terphenyl-d14	*85*		*10 - 120*	*04/14/15 12:07*	*04/16/15 00:21*	*1*

Lab Sample ID: LCS 440-248764/2-A
Matrix: Water
Analysis Batch: 249256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1.00	0.771		ug/L		77	47 - 103
Acenaphthylene	1.00	0.763		ug/L		76	45 - 102

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

Lab Sample ID: LCS 440-248764/2-A
Matrix: Water
Analysis Batch: 249256

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248764

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Anthracene	1.00	0.844		ug/L		84	47 - 111
Benzo[a]anthracene	1.00	0.860		ug/L		86	56 - 110
Benzo[a]pyrene	1.00	0.850		ug/L		85	48 - 110
Benzo[b]fluoranthene	1.00	0.936		ug/L		94	53 - 116
Benzo[g,h,i]perylene	1.00	0.984		ug/L		98	44 - 130
Benzo[k]fluoranthene	1.00	0.942		ug/L		94	51 - 127
Chrysene	1.00	0.907		ug/L		91	52 - 118
Dibenz(a,h)anthracene	1.00	0.939		ug/L		94	44 - 125
Fluoranthene	1.00	0.910		ug/L		91	51 - 116
Fluorene	1.00	0.813		ug/L		81	50 - 106
Indeno[1,2,3-cd]pyrene	1.00	0.946		ug/L		95	41 - 127
Naphthalene	1.00	0.731		ug/L		73	40 - 100
Phenanthrene	1.00	0.883		ug/L		88	49 - 110
Pyrene	1.00	0.911		ug/L		91	41 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*73*		*31 - 120*
Nitrobenzene-d5	*73*		*25 - 133*
Terphenyl-d14	*81*		*10 - 120*

Lab Sample ID: LCSD 440-248764/3-A
Matrix: Water
Analysis Batch: 249256

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248764

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	1.00	0.849		ug/L		85	47 - 103	10	35
Acenaphthylene	1.00	0.854		ug/L		85	45 - 102	11	35
Anthracene	1.00	0.891		ug/L		89	47 - 111	5	35
Benzo[a]anthracene	1.00	0.857		ug/L		86	56 - 110	0	35
Benzo[a]pyrene	1.00	0.885		ug/L		89	48 - 110	4	35
Benzo[b]fluoranthene	1.00	0.952		ug/L		95	53 - 116	2	35
Benzo[g,h,i]perylene	1.00	0.960		ug/L		96	44 - 130	2	35
Benzo[k]fluoranthene	1.00	0.944		ug/L		94	51 - 127	0	35
Chrysene	1.00	0.913		ug/L		91	52 - 118	1	35
Dibenz(a,h)anthracene	1.00	0.924		ug/L		92	44 - 125	2	35
Fluoranthene	1.00	0.907		ug/L		91	51 - 116	0	35
Fluorene	1.00	0.873		ug/L		87	50 - 106	7	35
Indeno[1,2,3-cd]pyrene	1.00	0.940		ug/L		94	41 - 127	1	35
Naphthalene	1.00	0.824		ug/L		82	40 - 100	12	35
Phenanthrene	1.00	0.909		ug/L		91	49 - 110	3	35
Pyrene	1.00	0.959		ug/L		96	41 - 115	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*83*		*31 - 120*
Nitrobenzene-d5	*83*		*25 - 133*
Terphenyl-d14	*81*		*10 - 120*

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

Lab Sample ID: MB 440-248804/5
Matrix: Water
Analysis Batch: 248804

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			04/14/15 16:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*65 - 140*		*04/14/15 16:47*	*1*

Lab Sample ID: LCS 440-248804/4
Matrix: Water
Analysis Batch: 248804

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	830		ug/L		104	80 - 120

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

Lab Sample ID: 440-106792-B-5 MS
Matrix: Water
Analysis Batch: 248804

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)	3700		8000	11200		ug/L		94	65 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*65 - 140*

Lab Sample ID: 440-106792-B-5 MSD
Matrix: Water
Analysis Batch: 248804

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)	3700		8000	11800		ug/L		101	65 - 140	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*65 - 140*

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

Lab Sample ID: MB 440-248474/1-A
Matrix: Water
Analysis Batch: 248684

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248474

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C13-C22	ND		0.50		mg/L		04/13/15 11:33	04/14/15 11:38	1
C23-C40	ND		0.50		mg/L		04/13/15 11:33	04/14/15 11:38	1

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

Lab Sample ID: MB 440-248474/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248684 — **Prep Batch: 248474**

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*70*		*45 - 120*	*04/13/15 11:33*	*04/14/15 11:38*	*1*

Lab Sample ID: LCS 440-248474/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248684 — **Prep Batch: 248474**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			1.00	0.649		mg/L		65	40 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*73*		*45 - 120*

Lab Sample ID: LCSD 440-248474/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248684 — **Prep Batch: 248474**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			1.00	0.543		mg/L		54	40 - 115	18	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane	*67*		*45 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-248306/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248306

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as NO3	ND		0.50		mg/L			04/11/15 14:16	1

Lab Sample ID: LCS 440-248306/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248306

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as NO3			5.00	5.20		mg/L		104	90 - 110		

Lab Sample ID: 440-106779-1 MS — **Client Sample ID: Clifford**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248306

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as NO3	ND		50.0	61.5	F1	mg/L		123	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-106779-1 MSD — **Client Sample ID: Clifford**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248306

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as NO3	ND		50.0	57.9		mg/L		116	80 - 120	6	20

Lab Sample ID: MB 440-248307/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			04/11/15 14:16	1
Chloride	ND		0.50		mg/L			04/11/15 14:16	1
Sulfate	ND		0.50		mg/L			04/11/15 14:16	1

Lab Sample ID: LCS 440-248307/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.93		mg/L		99	90 - 110
Chloride	5.00	4.87		mg/L		97	90 - 110
Fluoride	5.00	4.63		mg/L		93	90 - 110
Sulfate	5.00	4.72		mg/L		94	90 - 110

Lab Sample ID: 440-106779-1 MS — **Client Sample ID: Clifford**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248307

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	55		50.0	114		mg/L		119	80 - 120
Fluoride	ND		50.0	49.0		mg/L		98	80 - 120
Sulfate	ND		50.0	49.6		mg/L		99	80 - 120

Lab Sample ID: 440-106779-1 MSD — **Client Sample ID: Clifford**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	55		50.0	112		mg/L		113	80 - 120	2	20
Fluoride	ND		50.0	48.1		mg/L		96	80 - 120	2	20
Sulfate	ND		50.0	48.4		mg/L		97	80 - 120	3	20

Lab Sample ID: MB 440-248479/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248479

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50		mg/L			04/13/15 12:49	1
Chloride	ND		0.50		mg/L			04/13/15 12:49	1
Sulfate	ND		0.50		mg/L			04/13/15 12:49	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 440-248479/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248479

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.89		mg/L		98	90 - 110
Chloride	5.00	4.52		mg/L		90	90 - 110
Fluoride	5.00	4.57		mg/L		91	90 - 110
Sulfate	5.00	4.68		mg/L		94	90 - 110

Lab Sample ID: LCSD 440-248479/17 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248479

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	5.00	4.96		mg/L		99	90 - 110	1	20
Chloride	5.00	4.55		mg/L		91	90 - 110	1	20
Fluoride	5.00	4.68		mg/L		94	90 - 110	2	20
Sulfate	5.00	4.78		mg/L		96	90 - 110	2	20

Lab Sample ID: 440-106430-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248479

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND	F1	100	157	F1	mg/L		157	80 - 120
Chloride	580		100	593	4	mg/L		14	80 - 120
Fluoride	ND	F1	100	ND	F1	mg/L		0	80 - 120
Sulfate	540		100	608	4	mg/L		69	80 - 120

Lab Sample ID: 440-106430-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248479

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND	F1	100	167	F1	mg/L		167	80 - 120	6	20
Chloride	580		100	502	4	mg/L		-78	80 - 120	17	20
Fluoride	ND	F1	100	ND	F1	mg/L		0	80 - 120	NC	20
Sulfate	540		100	552	4	mg/L		13	80 - 120	10	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-249024/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 249171 — **Prep Batch: 249024**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	ND		0.050		mg/L		04/15/15 11:00	04/15/15 16:52	1

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

Lab Sample ID: MB 440-249024/1-A
Matrix: Water
Analysis Batch: 249164

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 249024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Arsenic	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Barium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Beryllium	ND		0.0020		mg/L		04/15/15 11:00	04/15/15 17:45	1
Boron	ND		0.050		mg/L		04/15/15 11:00	04/15/15 17:45	1
Cadmium	ND		0.0050		mg/L		04/15/15 11:00	04/15/15 17:45	1
Calcium	ND		0.10		mg/L		04/15/15 11:00	04/15/15 17:45	1
Chromium	ND		0.0050		mg/L		04/15/15 11:00	04/15/15 17:45	1
Cobalt	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Copper	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Iron	ND		0.040		mg/L		04/15/15 11:00	04/15/15 17:45	1
Lead	ND		0.0050		mg/L		04/15/15 11:00	04/15/15 17:45	1
Magnesium	ND		0.020		mg/L		04/15/15 11:00	04/15/15 17:45	1
Manganese	ND		0.020		mg/L		04/15/15 11:00	04/15/15 17:45	1
Molybdenum	ND		0.020		mg/L		04/15/15 11:00	04/15/15 17:45	1
Nickel	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Potassium	ND		0.50		mg/L		04/15/15 11:00	04/15/15 17:45	1
Selenium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Silver	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Sodium	ND		0.50		mg/L		04/15/15 11:00	04/15/15 17:45	1
Strontium	ND		0.020		mg/L		04/15/15 11:00	04/15/15 17:45	1
Thallium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Vanadium	ND		0.010		mg/L		04/15/15 11:00	04/15/15 17:45	1
Zinc	ND		0.020		mg/L		04/15/15 11:00	04/15/15 17:45	1

Lab Sample ID: LCS 440-249024/2-A
Matrix: Water
Analysis Batch: 249171

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 249024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	1.00	0.980		mg/L		98	80 - 120

Lab Sample ID: LCS 440-249024/2-A
Matrix: Water
Analysis Batch: 249164

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 249024

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	0.996		mg/L		100	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	1.00	1.03		mg/L		103	80 - 120
Boron	1.00	0.936		mg/L		94	80 - 120
Cadmium	1.00	1.01		mg/L		101	80 - 120
Calcium	5.00	4.95		mg/L		99	80 - 120
Chromium	1.00	1.01		mg/L		101	80 - 120
Cobalt	1.00	1.03		mg/L		103	80 - 120
Copper	1.00	1.03		mg/L		103	80 - 120
Iron	1.00	1.00		mg/L		100	80 - 120

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

Lab Sample ID: LCS 440-249024/2-A
Matrix: Water
Analysis Batch: 249164

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 249024

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.01		mg/L		101	80 - 120
Magnesium	5.00	4.90		mg/L		98	80 - 120
Manganese	1.00	1.04		mg/L		104	80 - 120
Molybdenum	1.00	1.02		mg/L		102	80 - 120
Nickel	1.00	1.02		mg/L		102	80 - 120
Potassium	10.0	10.0		mg/L		100	80 - 120
Selenium	1.00	0.970		mg/L		97	80 - 120
Silver	0.500	0.498		mg/L		100	80 - 120
Sodium	10.0	10.1		mg/L		101	80 - 120
Strontium	1.00	1.03		mg/L		103	80 - 120
Thallium	1.00	1.00		mg/L		100	80 - 120
Vanadium	1.00	1.02		mg/L		102	80 - 120
Zinc	1.00	0.983		mg/L		98	80 - 120

Lab Sample ID: 440-106449-I-2-J MS
Matrix: Water
Analysis Batch: 249171

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 249024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lithium	ND		1.00	0.911		mg/L		87	75 - 125

Lab Sample ID: 440-106449-I-2-J MS
Matrix: Water
Analysis Batch: 249164

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 249024

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	ND		1.00	1.08		mg/L		108	75 - 125
Arsenic	ND		1.00	1.04		mg/L		104	75 - 125
Barium	0.16		1.00	1.19		mg/L		103	75 - 125
Beryllium	ND		1.00	1.05		mg/L		105	75 - 125
Boron	0.082		1.00	1.07		mg/L		99	75 - 125
Cadmium	ND		1.00	1.00		mg/L		100	75 - 125
Calcium	90		5.00	94.5	4	mg/L		83	75 - 125
Chromium	ND		1.00	1.04		mg/L		103	75 - 125
Cobalt	ND		1.00	1.01		mg/L		101	75 - 125
Copper	ND		1.00	1.06		mg/L		106	75 - 125
Iron	0.47		1.00	1.49		mg/L		102	75 - 125
Lead	ND		1.00	1.01		mg/L		101	75 - 125
Magnesium	37		5.00	41.5	4	mg/L		97	75 - 125
Manganese	ND		1.00	1.05		mg/L		105	75 - 125
Molybdenum	ND		1.00	1.06		mg/L		104	75 - 125
Nickel	ND		1.00	1.00		mg/L		100	75 - 125
Potassium	4.5		10.0	15.2		mg/L		107	75 - 125
Selenium	ND		1.00	0.982		mg/L		98	75 - 125
Silver	ND		0.500	0.513		mg/L		103	75 - 125
Sodium	72		10.0	82.8	4	mg/L		103	75 - 125
Strontium	0.38		1.00	1.43		mg/L		105	75 - 125
Thallium	ND		1.00	0.972		mg/L		97	75 - 125
Vanadium	0.031		1.00	1.08		mg/L		104	75 - 125

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

Lab Sample ID: 440-106449-I-2-J MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 249164 — **Prep Batch: 249024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Zinc	ND		1.00	1.00		mg/L		99	75 - 125		

Lab Sample ID: 440-106449-I-2-K MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 249171 — **Prep Batch: 249024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lithium	ND		1.00	0.917		mg/L		88	75 - 125	1	20

Lab Sample ID: 440-106449-I-2-K MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 249164 — **Prep Batch: 249024**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	ND		1.00	1.11		mg/L		111	75 - 125	3	20
Arsenic	ND		1.00	1.08		mg/L		108	75 - 125	3	20
Barium	0.16		1.00	1.21		mg/L		105	75 - 125	2	20
Beryllium	ND		1.00	1.08		mg/L		108	75 - 125	2	20
Boron	0.082		1.00	1.09		mg/L		101	75 - 125	2	20
Cadmium	ND		1.00	1.02		mg/L		102	75 - 125	2	20
Calcium	90		5.00	96.0	4	mg/L		112	75 - 125	2	20
Chromium	ND		1.00	1.05		mg/L		105	75 - 125	2	20
Cobalt	ND		1.00	1.03		mg/L		103	75 - 125	2	20
Copper	ND		1.00	1.09		mg/L		109	75 - 125	3	20
Iron	0.47		1.00	1.51		mg/L		104	75 - 125	2	20
Lead	ND		1.00	1.03		mg/L		103	75 - 125	3	20
Magnesium	37		5.00	41.8	4	mg/L		103	75 - 125	1	20
Manganese	ND		1.00	1.08		mg/L		108	75 - 125	3	20
Molybdenum	ND		1.00	1.09		mg/L		107	75 - 125	3	20
Nickel	ND		1.00	1.02		mg/L		102	75 - 125	2	20
Potassium	4.5		10.0	15.6		mg/L		111	75 - 125	2	20
Selenium	ND		1.00	1.01		mg/L		101	75 - 125	3	20
Silver	ND		0.500	0.526		mg/L		105	75 - 125	3	20
Sodium	72		10.0	84.7	4	mg/L		123	75 - 125	2	20
Strontium	0.38		1.00	1.48		mg/L		110	75 - 125	3	20
Thallium	ND		1.00	0.996		mg/L		100	75 - 125	2	20
Vanadium	0.031		1.00	1.10		mg/L		107	75 - 125	2	20
Zinc	ND		1.00	1.03		mg/L		101	75 - 125	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-185876/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 186366 — **Prep Batch: 185876**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<1.0		1.0	0.23	ug/L		04/15/15 14:18	04/17/15 01:20	2

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	<0.67		0.67	0.15	pCi/L		04/15/15 14:18	04/17/15 01:20	2

Lab Sample ID: LCS 160-185876/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 186366 — **Prep Batch: 185876**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	1000	977		ug/L		98	80 - 120
Analyte	**Spike Added**	**LCS Result**	**LCS Qualifier**	**Unit**	**D**	**%Rec**	**%Rec. Limits**
Uranium	670	654		pCi/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 440-248801/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248927 — **Prep Batch: 248801**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		04/14/15 14:08	04/14/15 19:52	1

Lab Sample ID: LCS 440-248801/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248927 — **Prep Batch: 248801**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00800	0.00835		mg/L		104	80 - 120

Lab Sample ID: 440-106596-M-1-C MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248927 — **Prep Batch: 248801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00800	0.00854		mg/L		105	70 - 130

Lab Sample ID: 440-106596-M-1-D MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248927 — **Prep Batch: 248801**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00800	0.00820		mg/L		101	70 - 130	4	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-248644/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248644

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0		mg/L			04/13/15 11:57	1
Bicarbonate ion as HCO3	ND		4.8		mg/L			04/13/15 11:57	1
Carbonate as CO3	ND		2.4		mg/L			04/13/15 11:57	1
Hydroxide as OH	ND		1.4		mg/L			04/13/15 11:57	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 440-248644/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248644

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	85.4	86.7		mg/L		102	80 - 120

Lab Sample ID: 440-106672-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248644

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	130		131		mg/L		0.4	20
Bicarbonate ion as HCO3	160		160		mg/L		0.4	20
Carbonate as CO3	ND		ND		mg/L		NC	20
Hydroxide as OH	ND		ND		mg/L		NC	20

Lab Sample ID: MB 440-248961/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248961

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	10.0		4.0		mg/L			04/15/15 06:56	1
Bicarbonate ion as HCO3	12.2		4.8		mg/L			04/15/15 06:56	1
Carbonate as CO3	ND		2.4		mg/L			04/15/15 06:56	1
Hydroxide as OH	ND		1.4		mg/L			04/15/15 06:56	1

Lab Sample ID: LCS 440-248961/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248961

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	85.4	80.0		mg/L		94	80 - 120

Lab Sample ID: 440-106785-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248961

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	8100	B	8180		mg/L		0.5	20
Bicarbonate ion as HCO3	9900	B	9980		mg/L		0.5	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 440-248991/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248991

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10		mg/L			04/15/15 09:42	1

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

Lab Sample ID: LCS 440-248991/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1000	984		mg/L		98	90 - 110

Lab Sample ID: 440-106579-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 248991

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	220		214		mg/L		3	5

Method: 9310 - Gross Alpha / Beta (GFPC)

Lab Sample ID: MB 160-189677/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190171 — **Prep Batch: 189677**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Gross Alpha	0.3968	U	0.505	0.507	0.836	pCi/L	05/06/15 13:40	05/10/15 19:23	1
Gross Beta	0.8809		0.517	0.524	0.762	pCi/L	05/06/15 13:40	05/10/15 19:23	1

Lab Sample ID: LCS 160-189677/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190172 — **Prep Batch: 189677**

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	50.0	51.33		7.69	1.90	pCi/L	103	73 - 133

Lab Sample ID: LCSB 160-189677/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190172 — **Prep Batch: 189677**

Analyte	Spike Added	LCSB Result	LCSB Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Beta	95.1	94.63		10.0	1.05	pCi/L	100	75 - 125

Lab Sample ID: 160-11454-A-1-F MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190172 — **Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MS Result	MS Qual	Total Uncert. (2σ+/-)	MDC	Unit	%Rec	%Rec. Limits
Gross Alpha	5.32	G	82.0	94.11		14.1	3.44	pCi/L	108	35 - 150

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

Lab Sample ID: 160-11454-A-1-G MSBT — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190172 — **Prep Batch: 189677**

Analyte	Sample Result	Sample Qual	Spike Added	MSBT Result	MSBT Qual	Total Uncert. (2σ+/-)		MDC	Unit	%Rec	%Rec. Limits		
Gross Beta	3.67		156	154.8		16.4		1.80	pCi/L	97	89 - 143		

Lab Sample ID: 160-11454-A-1-H DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 190172 — **Prep Batch: 189677**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)		MDC	Unit			RER	RER Limit
Gross Alpha	5.32	G		3.871	U G	2.83		4.13	pCi/L			0.25	1
Gross Beta	3.67			3.249		1.25		1.61	pCi/L			0.16	1

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-185656/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 189644 — **Prep Batch: 185656**

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.005831	U	0.0362	0.0362	0.0699	pCi/L	04/14/15 13:22	05/06/15 07:00	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*04/14/15 13:22*	*05/06/15 07:00*	*1*

Lab Sample ID: LCS 160-185656/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 189644 — **Prep Batch: 185656**

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)		MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.2	10.43		1.03		0.0894	pCi/L	93	68 - 137		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*

Lab Sample ID: 480-78091-C-2-A DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 189645 — **Prep Batch: 185656**

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)		MDC	Unit			RER	RER Limit
Radium-226	0.146			0.1394		0.0699		0.0938	pCi/L			0.05	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*

QC Sample Results

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-185657/1-A
Matrix: Water
Analysis Batch: 188799

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 185657

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.08093	U	0.199	0.199	0.342	pCi/L	04/14/15 13:24	04/30/15 11:12	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*04/14/15 13:24*	*04/30/15 11:12*	*1*
Y Carrier	*90.8*		*40 - 110*	*04/14/15 13:24*	*04/30/15 11:12*	*1*

Lab Sample ID: LCS 160-185657/2-A
Matrix: Water
Analysis Batch: 188799

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 185657

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)		MDC	Unit	%Rec	%Rec. Limits		
Radium-228			3.44	2.306		0.406		0.344	pCi/L	67	56 - 140		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*109*		*40 - 110*
Y Carrier	*92.7*		*40 - 110*

Lab Sample ID: 480-78091-C-2-B DU
Matrix: Water
Analysis Batch: 188799

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 185657

Analyte	Sample Result	Sample Qual		DU Result	DU Qual	Total Uncert. (2σ+/-)		MDC	Unit			RER	RER Limit
Radium-228	0.0607	U		0.2791	U	0.239		0.381	pCi/L			0.47	1

Carrier	*DU %Yield*	*DU Qualifier*	*Limits*
Ba Carrier	*107*		*40 - 110*
Y Carrier	*90.8*		*40 - 110*

QC Association Summary

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

TestAmerica Job ID: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

GC/MS VOA

Analysis Batch: 248967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	8260B	
440-106779-1 MS	Clifford	Total/NA	Water	8260B	
440-106779-1 MSD	Clifford	Total/NA	Water	8260B	
440-106779-2	Bowles	Total/NA	Water	8260B	
LCS 440-248967/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-248967/4	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 248764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	3520C	
440-106779-2	Bowles	Total/NA	Water	3520C	
LCS 440-248764/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-248764/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-248764/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 249132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-248764/1-A	Method Blank	Total/NA	Water	8270C SIM	248764

Analysis Batch: 249256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	8270C SIM	248764
440-106779-2	Bowles	Total/NA	Water	8270C SIM	248764
LCS 440-248764/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	248764
LCSD 440-248764/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	248764

GC VOA

Analysis Batch: 248804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	8015B	
440-106779-2	Bowles	Total/NA	Water	8015B	
440-106792-B-5 MS	Matrix Spike	Total/NA	Water	8015B	
440-106792-B-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
LCS 440-248804/4	Lab Control Sample	Total/NA	Water	8015B	
MB 440-248804/5	Method Blank	Total/NA	Water	8015B	

GC Semi VOA

Prep Batch: 248474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	3510C	
440-106779-2	Bowles	Total/NA	Water	3510C	
LCS 440-248474/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-248474/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 440-248474/1-A	Method Blank	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Analysis Batch: 248684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	8015B	248474
440-106779-2	Bowles	Total/NA	Water	8015B	248474
LCS 440-248474/2-A	Lab Control Sample	Total/NA	Water	8015B	248474
LCSD 440-248474/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	248474
MB 440-248474/1-A	Method Blank	Total/NA	Water	8015B	248474

HPLC/IC

Analysis Batch: 248306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	300.0	
440-106779-1 MS	Clifford	Total/NA	Water	300.0	
440-106779-1 MSD	Clifford	Total/NA	Water	300.0	
440-106779-2	Bowles	Total/NA	Water	300.0	
LCS 440-248306/2	Lab Control Sample	Total/NA	Water	300.0	
MB 440-248306/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 248307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	300.0	
440-106779-1 MS	Clifford	Total/NA	Water	300.0	
440-106779-1 MSD	Clifford	Total/NA	Water	300.0	
440-106779-2	Bowles	Total/NA	Water	300.0	
LCS 440-248307/2	Lab Control Sample	Total/NA	Water	300.0	
MB 440-248307/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 248479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106430-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-106430-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
440-106779-1	Clifford	Total/NA	Water	300.0	
440-106779-2	Bowles	Total/NA	Water	300.0	
LCS 440-248479/2	Lab Control Sample	Total/NA	Water	300.0	
LCSD 440-248479/17	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 440-248479/4	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 185876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	3010A	
440-106779-2	Bowles	Total/NA	Water	3010A	
LCS 160-185876/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-185876/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 186366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	6020A	185876
440-106779-2	Bowles	Total/NA	Water	6020A	185876
LCS 160-185876/2-A	Lab Control Sample	Total/NA	Water	6020A	185876

Metals (Continued)

Analysis Batch: 186366 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-185876/1-A	Method Blank	Total/NA	Water	6020A	185876

Prep Batch: 248801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106596-M-1-C MS	Matrix Spike	Total/NA	Water	7470A	
440-106596-M-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	
440-106779-1	Clifford	Total/NA	Water	7470A	
440-106779-2	Bowles	Total/NA	Water	7470A	
LCS 440-248801/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 440-248801/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 248927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106596-M-1-C MS	Matrix Spike	Total/NA	Water	7470A	248801
440-106596-M-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	248801
440-106779-1	Clifford	Total/NA	Water	7470A	248801
440-106779-2	Bowles	Total/NA	Water	7470A	248801
LCS 440-248801/2-A	Lab Control Sample	Total/NA	Water	7470A	248801
MB 440-248801/1-A	Method Blank	Total/NA	Water	7470A	248801

Prep Batch: 249024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106449-I-2-J MS	Matrix Spike	Total Recoverable	Water	3005A	
440-106449-I-2-K MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
440-106779-1	Clifford	Total Recoverable	Water	3005A	
440-106779-2	Bowles	Total Recoverable	Water	3005A	
LCS 440-249024/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 440-249024/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 249164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106449-I-2-J MS	Matrix Spike	Total Recoverable	Water	6010B	249024
440-106449-I-2-K MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249024
LCS 440-249024/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249024
MB 440-249024/1-A	Method Blank	Total Recoverable	Water	6010B	249024

Analysis Batch: 249171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106449-I-2-J MS	Matrix Spike	Total Recoverable	Water	6010B	249024
440-106449-I-2-K MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	249024
440-106779-1	Clifford	Total Recoverable	Water	6010B	249024
440-106779-2	Bowles	Total Recoverable	Water	6010B	249024
LCS 440-249024/2-A	Lab Control Sample	Total Recoverable	Water	6010B	249024
MB 440-249024/1-A	Method Blank	Total Recoverable	Water	6010B	249024

Analysis Batch: 249251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total Recoverable	Water	6010B	249024
440-106779-2	Bowles	Total Recoverable	Water	6010B	249024

Metals (Continued)

Analysis Batch: 249323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total Recoverable	Water	6010B	249024
440-106779-2	Bowles	Total Recoverable	Water	6010B	249024

General Chemistry

Analysis Batch: 248644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106672-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	
440-106779-1	Clifford	Total/NA	Water	SM 2320B	
LCS 440-248644/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-248644/3	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 248961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-2	Bowles	Total/NA	Water	SM 2320B	
440-106785-A-1 DU	Duplicate	Total/NA	Water	SM 2320B	
LCS 440-248961/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 440-248961/2	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 248991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106579-A-1 DU	Duplicate	Total/NA	Water	SM 2540C	
440-106779-1	Clifford	Total/NA	Water	SM 2540C	
440-106779-2	Bowles	Total/NA	Water	SM 2540C	
LCS 440-248991/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 440-248991/1	Method Blank	Total/NA	Water	SM 2540C	

Rad

Prep Batch: 185656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	PrecSep-21	
440-106779-2	Bowles	Total/NA	Water	PrecSep-21	
480-78091-C-2-A DU	Duplicate	Total/NA	Water	PrecSep-21	
LCS 160-185656/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
MB 160-185656/1-A	Method Blank	Total/NA	Water	PrecSep-21	

Prep Batch: 185657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	PrecSep_0	
440-106779-2	Bowles	Total/NA	Water	PrecSep_0	
480-78091-C-2-B DU	Duplicate	Total/NA	Water	PrecSep_0	
LCS 160-185657/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
MB 160-185657/1-A	Method Blank	Total/NA	Water	PrecSep_0	

Prep Batch: 189677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11454-A-1-F MS	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-G MSBT	Matrix Spike	Total/NA	Water	Evaporation	
160-11454-A-1-H DU	Duplicate	Total/NA	Water	Evaporation	

Rad (Continued)

Prep Batch: 189677 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-106779-1	Clifford	Total/NA	Water	Evaporation	
440-106779-2	Bowles	Total/NA	Water	Evaporation	
LCS 160-189677/2-A	Lab Control Sample	Total/NA	Water	Evaporation	
LCSB 160-189677/3-A	Lab Control Sample	Total/NA	Water	Evaporation	
MB 160-189677/1-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
F1	MS and/or MSD Recovery 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.

Metals

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.

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.

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: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

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	NELAP	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	04-30-15 *
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

TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Jane McNaboe	Site Contact: Josh Meyer	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:Tamarack, Clifford and Bowles Leases	☐ 2 days			Job / SDG No.:
P O # : TAM118	☐ 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	PAH List 8270C SIM SVOC	300.0 Chloride, Bromide, Sulfate	300.0 Nitrate NO3	SM 2320B Alkalinity all forms Ion	9310 Gross Alpha	9315 Rad226	9320 Rad 228	6020A Uranium	Ra226_RA228				Sample Specific Notes:
Clifford	4/10/15	0900		Water	20	N		X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Bowles	4/10/15	0925		W	20	N		X	X	X	X	X	X	X	X	X	X	X	X	X	X				

440-106779 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.

304/285 #71

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: 1.4 Corr'd: 0.0 | Therm ID No.: #71

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Josh Meyer	Enviroteca	4/10/15 1440	Latif	4/10/15	~~12:40~~
Relinquished by: Latif	Company: 4/10/15 18:55	Date/Time:	Received by:	Company:	Date/Time: 14:40
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAI	Date/Time: 04/10/15 1855

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

Login Sample Receipt Checklist

Client: Envirotech Consultants, Inc.

Job Number: 440-106779-1
SDG Number: Tamarack, Clifford and Bowles Leases

Login Number: 106779
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.	N/A	
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: 440-106779-1
SDG: Tamarack, Clifford and Bowles Leases

Method: 9315 - Radium-226 (GFPC)

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

		Percent Yield (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**Ba (40-110)**							
440-106779-1	Clifford	105							
440-106779-2	Bowles	96.9							
480-78091-C-2-A DU	Duplicate	107							
LCS 160-185656/2-A	Lab Control Sample	109							
MB 160-185656/1-A	Method Blank	109							

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

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

		Percent Yield (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**Ba (40-110)**	**Y (40-110)**						
440-106779-1	Clifford	105	91.2						
440-106779-2	Bowles	96.9	90.1						
480-78091-C-2-B DU	Duplicate	107	90.8						
LCS 160-185657/2-A	Lab Control Sample	109	92.7						
MB 160-185657/1-A	Method Blank	109	90.8						

Tracer/Carrier Legend

Ba = Ba Carrier

Y = Y Carrier