

Mr. Robert Weimer  
Alaska Department of Environmental Conservation (ADEC)  
555 Cordova Street  
Anchorage, Alaska 95501

Subject:  
2019 Second Semi-Annual Groundwater Monitoring Report

ENVIRONMENT

Dear Mr. Weimer,

On behalf of Chevron Environmental Management Company (Chevron), Arcadis US, Inc. (Arcadis) has prepared the attached *2019 Second Semi-Annual Groundwater Monitoring Report* for the second semi-annual groundwater monitoring and sampling event for the following facility:

Date:  
December 31, 2019

Contact:  
Nicole Monroe

<u>Chevron Branded</u> <u>Station No.</u>	<u>ADEC File No.</u>	<u>Hazard ID:</u>	<u>Location</u>
96489	2100.26.066	23518	1304 Airport Heights Drive Anchorage, Alaska

Phone:  
503.785.9414

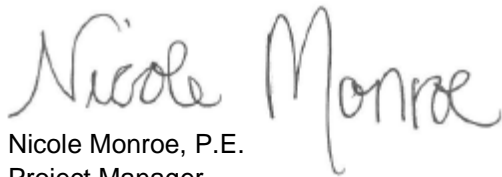
Email:  
[Nicole.Monroe@arcadis.com](mailto:Nicole.Monroe@arcadis.com)

If you have any questions, please do not hesitate to contact me.

Our ref:  
30015219

Sincerely,

Arcadis U.S., Inc.



Nicole Monroe, P.E.  
Project Manager  
EV-149409

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Tim Bishop (electronic copy)  
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Fred K. Heinzelmann  
Paul Mitchell CHFM, CHSP

Chevron Environmental Management Company

# **2019 SECOND SEMI-ANNUAL GROUNDWATER MONITORING REPORT**

Chevron-Branded Service Station 96489  
1304 Airport Heights Drive  
Anchorage, Alaska  
ADEC File No. 2100.26.066

December 31 2019

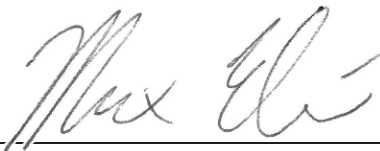


## 2019 SECOND SEMI-ANNUAL GROUNDWATER MONITORING REPORT



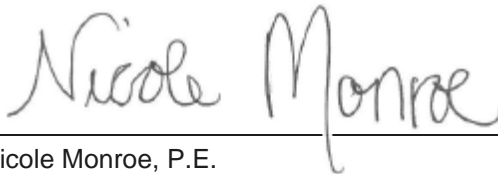
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Evan Wujcik  
Environmental Engineer



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Max Elias  
Environmental Scientist



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Nicole Monroe, P.E.  
Project Manager  
EV-149409

### **Chevron-Branded Service Station 96489**

1304 Airport Heights Drive  
Anchorage, Alaska

ADEC File No: 2100.26.066  
HAZARD ID No: 23518

Prepared for:

Chevron Environmental Management  
Company

Prepared by:

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Our Ref.:  
30015219

Date:  
December 31, 2019

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**SEMI-ANNUAL STATUS REPORT  
SECOND HALF 2019  
December 31, 2019**

Facility No: Chevron-Branded Service Station 96489      Address: 1304 Airport Heights Drive Anchorage, Alaska

Arcadis Contact Person / Phone No.: \_\_\_\_\_ Nicole Monroe / (503) 785-9414

Arcadis Project No.: \_\_\_\_\_ 30015219

Primary Agency/Regulatory ID No.: \_\_\_\_\_ Alaska Department of Environmental Conservation (ADEC) /  
Robert Weimer / ADEC file ID: 2100.26.066

**WORK CONDUCTED THIS PERIOD [Second Half 2019]:**

1. Conducted semi-annual groundwater monitoring activities on October 9, 2019.
2. Prepared the *Semi-Annual Status Report, Second Half 2019*.

**WORK PROPOSED NEXT PERIOD [First Half 2020]:**

1. Conduct semi-annual groundwater monitoring activities in the first half of 2020.
2. Prepare the *Semi-Annual Status Report, First Half 2020*.

Current Phase of Project:	Monitoring	
Frequency of Monitoring / Sampling:	Semi-Annual	
Is LNAPL Present On-site:	None	
Cumulative LNAPL Recovered to Date:	0.00	(gallons)
Approximate Depth to Groundwater:	25.95 to 28.38	(feet below top of casing)
Approximate Groundwater Elevation:	112.52 to 113.42	(feet relative to corresponding datum)
Groundwater Flow Direction	Northwest	
Groundwater Gradient	0.0035	(feet per foot)

Current Remediation Techniques:	None
Permits for Discharge:	None
Summary of Unusual Activity:	MW-7 was not sampled due to sediment in the well clogging sampling equipment
Agency Directive Requirements:	None

## 1 INTRODUCTION

On behalf of Chevron Environmental Management Company (CEMC), Arcadis US, Inc. (Arcadis), has prepared this report to document the second semi-annual groundwater sampling event of 2019 for Chevron facility 96489, located at 1304 Airport Heights Drive Anchorage, Alaska (the site). The site location map and site plan are shown as Figure 1 and Figure 2, respectively.

This work was conducted under the direction of a “qualified person” [18 AAC 75. 990 (100), and 18 AAC 78.995 (118)]. Site background and history summaries are attached as Appendix A.

## 2 GROUNDWATER MONITORING

### 2.1 Groundwater Gauging Methods

The 2019 second semi-annual groundwater gauging event was conducted on October 9, 2019. Site monitoring wells were gauged with an oil/water interface probe to determine depth-to-water and to ascertain if LNAPL was present.

In order to prevent the possibility of cross-contamination, wells were gauged in the order of lowest to highest historical petroleum hydrocarbon concentrations in groundwater. In addition, non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water.

### 2.2 Groundwater Elevation and Flow Direction

During the 2019 second semi-annual event, monitoring wells MW-4, MW-5, MW-6, MW-7, MW-10 and MW-11 were scheduled to be gauged for groundwater elevations and the presence of LNAPL. The groundwater monitoring event field notes are presented in Appendix B.

The inferred groundwater flow direction for the second semi-annual 2019 monitoring events is to the northwest and is consistent with historical flow direction. Current and historical groundwater depth-to-water and elevation data are included in Table 1 and Table 2 respectively. A groundwater contour map is presented as Figure 3.

## 2.3 Groundwater Sampling Methods

The second semi-annual groundwater monitoring event was conducted on October 9, 2019. Groundwater samples were collected from MW-4, MW-5, MW-6, MW-10 and MW-11 using a low flow purge sampling method.

Sampling procedures were conducted in accordance with ADEC *Field Sampling Guidance* (ADEC, 2017). Monitoring well caps were removed to allow groundwater levels to stabilize and equilibrate before using an electronic interface probe (EIP) meter capable of 0.01-foot accuracy to measure the depth to groundwater and total well depth. A bladder pump with compressor & control unit with clean/disposable Teflon lined tubing and bladders was used to purge groundwater from the wells and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Water table drawdown was continuously monitored during purging with a water level meter and the flow rate of the pump was adjusted to limit drawdown to 0.1 meter. The intake of the pump was set as close as possible to the soil groundwater interface. Water quality parameters were monitored during purging with a multi-parameter water quality meter equipped with a flow through cell and Turbidity meter. Parameters were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. The flow rate was reduced to 100-150 ml/minute and samples were collected from the discharge line into laboratory sample bottles. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

- $\pm 3\%$  for temperature (minimum of  $\pm 0.2\text{ C}^\circ$ ),
- $\pm 0.1$  for pH,
- $\pm 3\%$  for conductivity,
- $\pm 10\text{ mv}$  for redox potential,
- $\pm 10\%$  for dissolved oxygen, and
- $\pm 10\%$  for turbidity.

Sample bottles were labeled, stored in a cooler packed with ice, and submitted to Eurofins Test America Seattle (Eurofins) in Tacoma, Washington, under proper chain-of-custody procedures.

Groundwater samples collected from monitoring wells MW-4, MW-5, MW-6, MW-10, and MW-11 were submitted to the analytical laboratory for the analysis of Benzene, Toluene, Ethylbenzene and Total Xylenes (collectively BTEX) by United States Environmental Protection Agency (USEPA) Method 8260C. Additionally, groundwater samples collected from monitoring wells MW-4, MW-10, and MW-11 were submitted to the analytical laboratory for the analysis of Gasoline range organics (GRO) by Alaska method AK101.

A groundwater duplicate sample was collected from monitoring well MW-6. The duplicate samples were analyzed for Benzene, Toluene, Ethylbenzene, and Xylenes (collectively BTEX) and GRO. The duplicate sample was submitted blind with the sample set to Eurofins. Monitoring well MW-7 was not able to be sampled during the second semi-annual sampling event due to sediments being present in the well.



## 2.4 Groundwater Analytical Results

Routine analytical results for the above-mentioned constituents obtained from the second semi-annual 2019 groundwater monitoring event are summarized in Table 1 and are shown on Figure 4. PAHs analytical results are summarized in Table 3.

## 3 LABORATORY DATA QUALITY ASSURANCE SUMMARY

As required by ADEC (Technical Memorandum 06-002, dated March 2009), Arcadis completed a laboratory data review checklist for each of the laboratory reports generated for the 2019 second semi-annual event. The laboratory reports are included as Appendix C and data review checklists are included as Appendix D. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

### 3.1 Precision

The relative percent difference (RPD) for laboratory control sample / laboratory control sample duplicate (LCS/LCSD) and field duplicates (FD) were within the control limits.

The precision of the data, as measured by laboratory quality control (QC) indicators, suggest that the Data Quality Objectives (DQOs) were met.

### 3.2 Accuracy

The percent recoveries for LCS/LCSD and surrogates were within the control limits.

The accuracy of the data, as measured by laboratory quality control (QC) indicators, suggest that the DQOs were met.

### 3.3 Representativeness

The data appear to be representative of site conditions and are generally consistent with historical groundwater monitoring results and expected impacts to groundwater.

### 3.4 Comparability

The laboratory results are presented in the same units as previous reports to allow comparison.

### 3.5 Completeness

The results appear to be valid and usable, and thus, the laboratory results have 100% completeness.

### 3.6 Sensitivity

The sensitivity of the analyses was adequate for the samples as the detection limits were less than the ADEC GCLs for compounds.

## 4 CONCLUSIONS AND RECOMMENDATIONS

The groundwater data collected during the second semi-annual 2019 event indicate groundwater flow direction (northwest) is generally consistent with historical data. During the second semi-annual 2019 groundwater monitoring events, groundwater samples were collected for analysis from MW-4, MW-5, MW-

6, MW-10, and MW-11. Analytical results from the monitoring wells are generally consistent with historical data.

Groundwater monitoring will continue in accordance with the current semi-annual schedule. The first semi-annual sampling event of 2020 will be conducted in the spring of 2020.

## 5 REFERENCES

ADEC. *Field Sampling Guidance*. Division of Spill Prevention and Response Contaminated Sites Program. August, 2017.

ADEC Technical Memorandum, March, 2017. *Data Quality Objectives, Checklists, Quality Assurance Requirements for Laboratory Data, and Sample Handling*. ADEC, Division of Spill Prevention and Response Contaminated Sites Program.

# TABLES



**Table 1. Current Groundwater Gauging and Analytical Results**

Chevron-Branded Service Station 96489  
 1304 Airport Heights Drive  
 Anchorage, Alaska

Well ID	Sample Date	Screen Interval (ft bTOC)	TOC (ft)	Datum	DTW* (ft bTOC)	LNAPL thickness (ft)	GW Elev (ft)	TPH-g (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)
<b>ADEC Groundwater Cleanup Levels</b>								<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>
<b>MW-4</b>	10/09/2019	--	138.88	NAVD88	25.95	0.00	112.93	<b>0.47</b>	<b>0.0072</b>	< 0.0020 B	<b>0.03</b>	<b>0.125</b>
<b>MW-5</b>	10/09/2019	--	140.36	NAVD88	27.32	0.00	113.04	--	<b>0.00057 J</b>	< 0.00039	< 0.00050	< 0.00075
<b>MW-6</b>	10/09/2019	--	140.01	NAVD88	26.59	0.00	113.42	-- [-]	< 0.00053 [ <lt; 0.00053]<="" td=""> <td>&lt; 0.00039 [<lt; 0.00039]<="" td=""> <td>&lt; 0.00050 [<lt; 0.00050]<="" td=""> <td>&lt; 0.00075 [<lt; 0.00075]<="" td=""> </lt;></td></lt;></td></lt;></td></lt;>	< 0.00039 [ <lt; 0.00039]<="" td=""> <td>&lt; 0.00050 [<lt; 0.00050]<="" td=""> <td>&lt; 0.00075 [<lt; 0.00075]<="" td=""> </lt;></td></lt;></td></lt;>	< 0.00050 [ <lt; 0.00050]<="" td=""> <td>&lt; 0.00075 [<lt; 0.00075]<="" td=""> </lt;></td></lt;>	< 0.00075 [ <lt; 0.00075]<="" td=""> </lt;>
<b>MW-7</b>	10/09/2019	--	139.75	NAVD88	26.68	0.00	113.07	Not sampled due to sediments in the well				
<b>MW-10</b>	10/09/2019	--	141.25	NAVD88	28.38	0.00	112.87	< 0.1	< 0.00053	< 0.00039	< 0.00050	< 0.00075
<b>MW-11</b>	10/09/2019	--	140.32	NAVD88	27.8	0.00	112.52	< 0.1	< 0.00053	< 0.00039	< 0.00050	< 0.00075
<b>Trip Blank</b>	10/09/2019	--	--	NAVD88	--	--	--	< 0.1	< 0.00053	< 0.00039	< 0.00050	< 0.00075

**Notes:**

ID- Identification

MW = Groundwater monitoring well

TOC = Top of casing

DTW = Depth to groundwater

ft bTOC = Feet below top of casing

ft = Feet

GW Elev = Groundwater elevation

mg/L = Milligrams per liter

**Bold** = Value exceeds laboratory reporting limits

**Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level

< 0.00039 = Not detected at or above the method detection limit (MDL)

NAVD88 = North American Vertical Datum of 1988

ADEC = Alaska Department of Environmental Conservation

-- = Not Analyzed/Not Measured

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Alaska Method AK101

Samples analyzed by Method SW-846 8260C:

Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only

B = Compound considered non-detect at the listed value due to associated blank contamination.

\* Depth to water updated from well survey dated June 6, 2019

LNAPL = Light Non-Aqueous Phase Liquid

[ ] = Duplicate sample results









MW-7	10/20/2016	--	99.54	26.70	--	72.84	1.9	0.018	0.003	0.065	0.35	--
MW-7	06/23/2017	--	99.54	26.78	--	72.76	2.7	0.017	0.007	0.13	0.71	--
MW-7	10/11/2017	--	99.54	26.58	--	72.96	1.5	0.018	0.004	0.083	0.47	--
MW-7	05/22/2018	--	99.54	26.81	--	72.73	2.4	0.019	0.008	0.12	0.59	<0.0005
MW-7	10/17/2018	--	99.54	26.49	--	73.05	6.0 [5.8]	0.055 [0.052]	0.019 [0.017 J]	0.30 [0.27]	1.8 / 1.7	--
MW-7	5/28/2019	--	99.54	26.62	0.00	113.01	3.2	0.028	0.007	0.12	0.62 D	--
MW-7	10/09/2019	--	139.75	26.68	0.00	113.07	--	--	--	--	--	--
												Not sampled due to sediments in the well
MW-8	09/20/2000	--	--	25.46	--	--	<0.05	<0.0002	<0.0005	<0.0005	<0.001	<0.001
MW-8	05/04/2001	--	--	--	--	--	--	--	--	--	--	--
MW-8	06/25/2001	--	--	--	--	--	<0.05	0.000224	<0.0005	<0.0005	<0.001	<0.001
MW-8	09/26/2001	--	--	26.00	--	--	<0.05 [<0.05]	<0.0002 [<0.0002]	<0.0005 [<0.0005]	<0.0005 [<0.0005]	<0.001 [<0.001]	<0.001 [<0.001]
MW-8	05/08/2002	--	129.94	--	--	--	--	--	--	--	--	--
MW-8	10/02/2002	--	129.94	--	--	--	--	--	--	--	--	--
MW-8	12/12/2002	--	129.95	24.94	--	105.01	0.029	<0.0005	<0.0005	<0.0005	<0.0005	0.055
MW-8	06/05/2003	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	10/02/2003	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	06/08/2004	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	09/27/2004	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	05/10/2005	--	129.95	25.18	--	104.77	<0.01 [<0.01]	<0.0002 [<0.0002]	0.0003 [<0.0002]	<0.0002 [<0.0002]	<0.0006 [<0.0006]	--
MW-8	09/27/2005	--	129.95	25.35	--	104.60	<0.01 [<0.01]	<0.0005 [<0.0005]	<0.0005 [<0.0005]	<0.0005 [<0.0005]	<0.0005 [<0.0005]	--
MW-8	05/16/2006	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	09/22/2006	--	129.95	24.99	--	104.96	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-8	05/23/2007	--	129.95	--	--	--	--	--	--	--	--	--
MW-8	09/21/2007	--	129.95	25.36	--	104.59	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-8	05/02/2008	--	129.94	--	--	--	--	--	--	--	--	--
MW-8	07/14/2008	--	97.04	--	--	--	--	--	--	--	--	--
MW-8	05/05/2009	--	97.04	--	0.00	--	--	--	--	--	--	--
MW-9	12/12/2002	--	132.96	26.32	--	106.64	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	06/05/2003	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	10/02/2003	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	06/08/2004	--	132.96	26.71	--	106.25	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	09/27/2004	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	05/10/2005	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	09/27/2005	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	05/16/2006	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	09/22/2006	--	132.96	--	--	--	--	--	--	--	--	--
MW-9	05/23/2007	--	132.96	26.86	--	106.10	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-9	09/21/2007	--	132.96	26.93	--	106.03	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-9	05/02/2008	--	132.96	27.00	--	105.96	<0.05	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-9	07/14/2008	--	99.67	26.00	--	73.67	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-9	05/14/2009	--	99.67	26.19	--	73.48	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-9	5/28/2019	--	--	--	--	--	--	--	--	--	--	Cannot Locate
MW-10	10/02/2003	--	132.15	28.19	--	103.96	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
MW-10	06/08/2004	--	132.15	28.45	--	103.70	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-10	09/27/2004	--	132.15	26.91	--	105.24	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-10	05/10/2005	--	132.15	28.57	--	103.58	<0.01	<0.0002	<0.0002	<0.0002	<0.0006	--
MW-10	09/27/2005	--	132.15	28.65	--	103.50	<0.01	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-10	05/16/2006	--	132.15	28.84	--	103.31	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	09/22/2006	--	132.15	28.33	--	103.82	<0.01	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	05/23/2007	--	132.15	28.58	--	103.57	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-10	09/21/2007	--	132.15	28.60	--	103.55	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-10	05/02/2008	--	132.15	28.62	--	103.53	<0.05	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	07/14/2008	--	101.07	27.46	--	73.61	<0.01	<0.001	<0.001	<0.001	<0.002	--
MW-10	05/05/2009	--	101.07	27.97	--	73.10	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	08/28/2009	--	101.07	27.98	--	73.09	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	07/22/2010	--	101.07	28.18	--	72.89	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	09/05/2010	--	101.07	28.03	--	73.04	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	06/09/2011	--	101.07	29.39	--	71.68	--	--	--	--	--	--
MW-10	06/10/2011	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	09/18/2011	--	101.07	28.94	--	72.13	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	05/30/2012	--	101.07	28.45	--	72.62	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	09/19/2012	--	101.07	28.77	--	72.30	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-10	05/16/2013	--	101.07	28.43	--	72.64	--	--	--	--	--	--



Trip Blank	07/14/2008	--	--	--	--	--	<0.01	<0.001	<0.001	<0.001	<0.002	--
Trip Blank	04/29/2009	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	08/19/2009	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	07/22/2010	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	08/27/2010	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	06/10/2011	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	09/07/2011	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	05/30/2012	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	09/19/2012	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	05/17/2013	--	--	--	--	--	-	<0.00024	<0.00023	<0.00024	<0.00072	--
Trip Blank	05/05/2014	--	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--
Trip Blank	11/06/2014	--	--	--	--	--	<0.050	<0.00015	<b>0.00020 J</b>	<0.00016	<0.00040	--
Trip Blank	04/28/2015	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025
Trip Blank	11/11/2015	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	05/26/2016	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	10/20/2016	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	06/23/2017	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	10/11/2017	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	05/22/2018	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blank	10/17/2018	--	--	--	--	--	<0.014	<0.0002	<0.0002	<0.0002	<0.0005	--
Trip Blank	10/09/2019	--	--	--	--	--	< 0.1	< 0.00053	< 0.00039	< 0.00050	< 0.00075	--

**Notes:**

ID = Identification

MW = Groundwater monitoring well

TOC = Top of casing

DTW = Depth to groundwater

ft bTOC = Feet below top of casing

ft = Feet

GW Elev = Groundwater elevation

mg/L = Milligrams per liter

<0.0002 = Not detected at or above the method detection limit (MDL)

**Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level

**Bold** = Value exceeds MDL

LNAPL = Light Non-Aqueous Phase Liquid

[ ] = Duplicate Result

NADV88 = North American Vertical Datum of 1988

-- = Not Analyzed

TPH-g = Total petroleum hydrocarbons, gasoline range by LUFT GC/MS according to Alaska Method AK101

Samples analyzed by Method SW-846 8260C:

Benzene, toluene, ethylbenzene and total xylenes (collectively BTEX)

ADEC = Alaska Department of Environmental Conservation

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only

B = Compound considered non-detect at the listed value due to associated blank contamination.

D = The sample results reported from dilution.

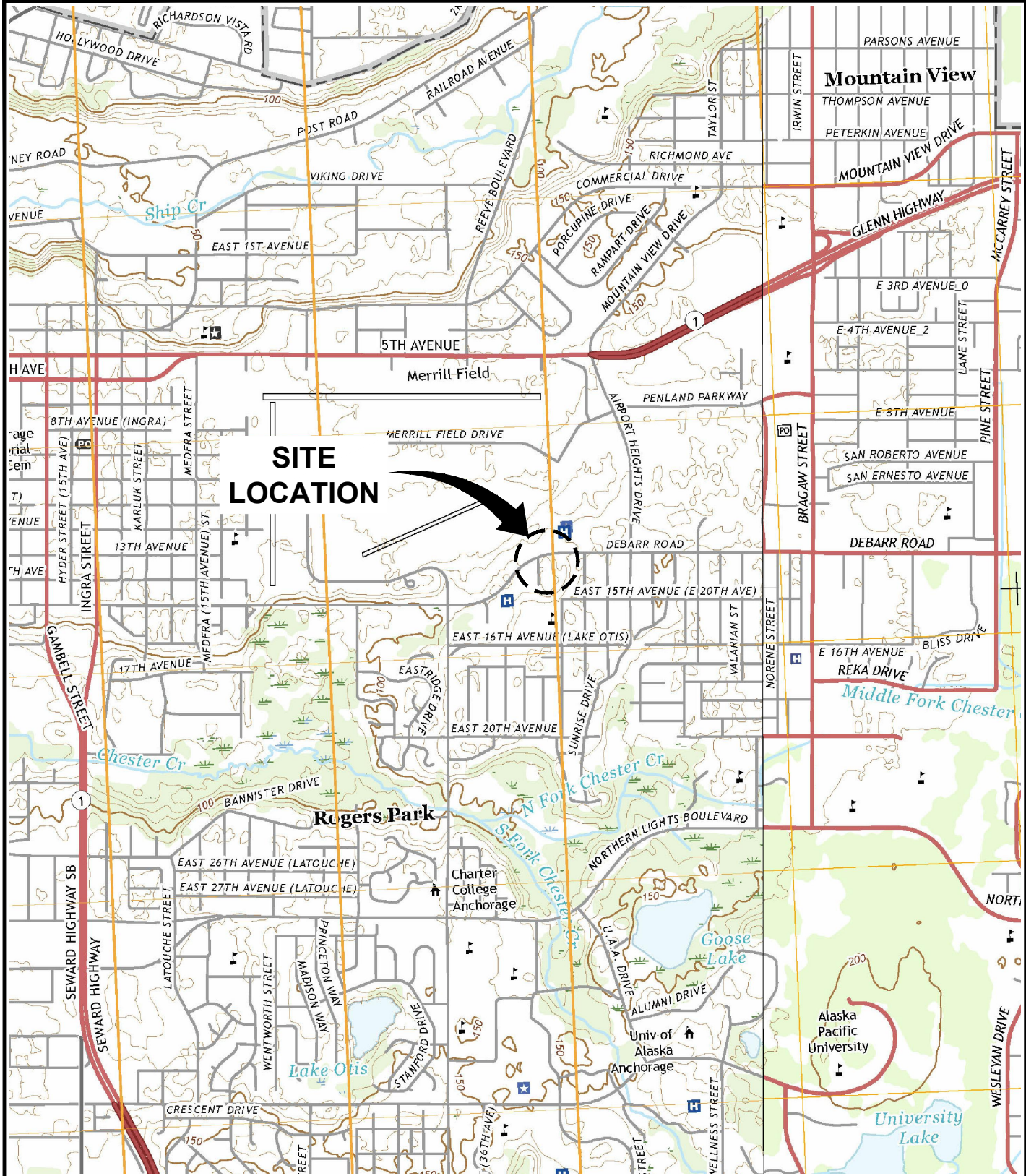
**Table 3: Historical Groundwater Analytical Results- Polynuclear Aromatic Hydrocarbons (PAHs)**  
**Chevron-Branded Service Station 96489**  
**1304 Airport Heights Drive**  
**Anchorage Alaska**

Well ID	Sample Date	Acenaphthene (mg/L)	Acenaphthylene (mg/L)	Anthracene (mg/L)	Benzo(a)anthracene (mg/L)	Benzo(a)pyrene (mg/L)	Benzo(b)fluoranthene (mg/L)	Benzo(g,h,i)perylene (mg/L)	Benzo(k)fluoranthene (mg/L)	Chrysene (mg/L)	Dibenz(a,h)anthracene (mg/L)	Fluoranthene (mg/L)	Fluorene (mg/L)	Indeno(1,2,3-cd)pyrene (mg/L)	Naphthalene (mg/L)	Phenanthrene (mg/L)	Pyrene (mg/L)
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.53</b>	<b>0.26</b>	<b>0.043</b>	<b>0.00012</b>	<b>0.000034</b>	<b>0.00034</b>	<b>0.00026</b>	<b>0.00060</b>	<b>0.002</b>	<b>0.00034</b>	<b>0.26</b>	<b>0.29</b>	<b>0.00019</b>	<b>0.0017</b>	<b>0.17</b>	<b>0.12</b>
<b>MW-4</b>	07/22/2010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
<b>MW-4</b>	05/22/2018	<0.000009	<b>[0.00001 J]</b>	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<0.000009	<b>[0.00013 J]</b>	<0.000002
<b>MW-5</b>	05/22/2018	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000003	<0.000003	<0.000002
<b>MW-6</b>	05/22/2018	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000003	<0.000003	<0.000002
<b>MW-7</b>	07/22/2010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
<b>MW-7</b>	05/30/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>MW-7</b>	05/22/2018	<0.000001	<0.000001	<0.000001	<0.000001	0.000002 J	0.000002 J	0.000003 J	0.000002 J	<0.000001	0.000003 J	<0.000001	0.000001 J	0.000003 J	<b>0.016</b>	<0.000003	<0.000002
<b>MW-10</b>	05/22/2018	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000003	<0.000003	<0.000002
<b>MW-11</b>	05/22/2018	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000001	<0.000003	<0.000003	<0.000002

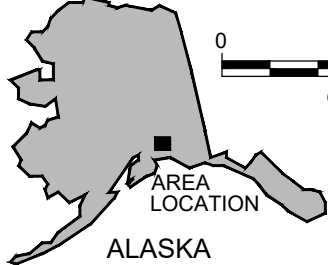
**Notes:**  
 MW = Groundwater monitoring well  
 PAHs = poly aromatic hydrocarbons by Method SW8270  
 ADEC = Alaska Department of Environmental Conservation  
**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level  
 mg/L = milligrams per liter  
**Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level  
 J = Estimated value  
 - = Not measured / not analyzed  
 <x = Constituent not detected above x milligrams per liter  
 [] = Duplicate results  
 <0.0001 = Not detected at or above the Method detection limit

# FIGURES





**SOURCE:** USGS QUAD MAPS; ANCHORAGE A-8 NE, AK 2015 AND A-8 NW, AK 2016.



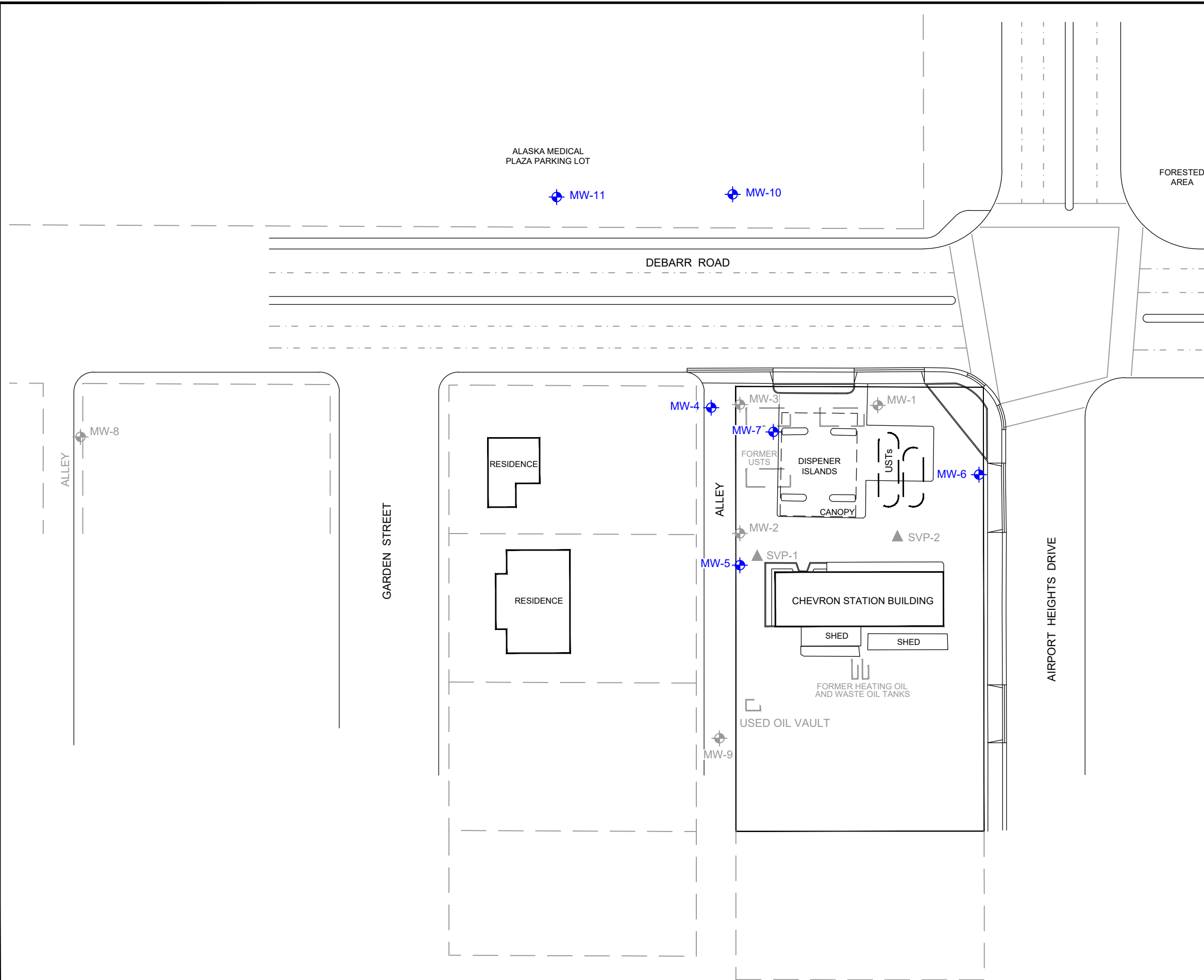
CHEVRON-BRANDED SERVICE STATION 96489  
1304 AIRPORT HEIGHTS DRIVE  
ANCHORAGE, ALASKA

**SITE LOCATION MAP**



FIGURE  
**1**

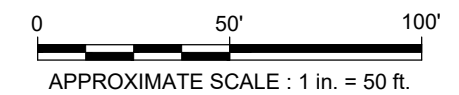
CITY/Rect) DIV/Group/Rect) DB/Rect) LD/Rect) PIC/Rect) PM/Rect) TM/Rect) Lyr/Rect) OFF/Rect) REF\*  
C:\Users\1040181M\360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\96489 - Anchorage\2018\GWR\AK000\_6489\01-DWG\96489-Figure 2-SP.dwg ACADVER: 23.0S (LMS TECH) PAGESSETUP: --- PLOTSTYLETABLE: --- PLOTTED: 11/28/2019 2:58 PM  
BY: CHANDREGOWDA, VIKRAM



- LEGEND:**
- MW-4 GROUNDWATER MONITORING WELL
  - MW-3 ABANDONED GROUNDWATER MONITORING WELL
  - SVP-2 DESTROYED SOIL PROBE LOCATION



**SOURCE:**  
BASE MAP 'SITE PLAN' (96489-940418(034)GN-WA002[1].DWG),  
PROVIDED BY 'GHD' MAP DATE 11/20/18, SCALE 1"=40'.

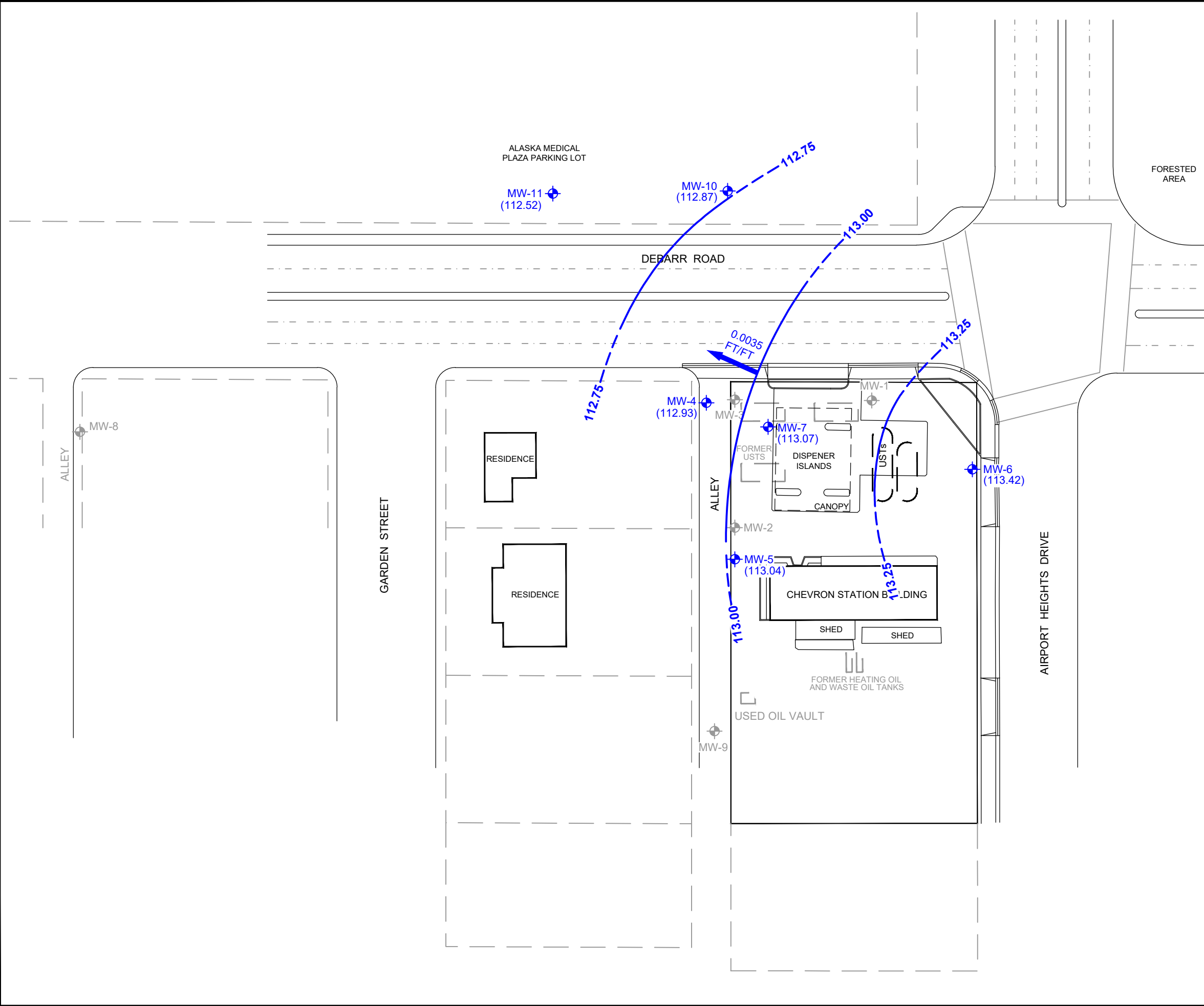


CHEVRON-BRANDED SERVICE STATION 96489  
1304 AIRPORT HEIGHTS DRIVE  
ANCHORAGE, ALASKA

### SITE PLAN

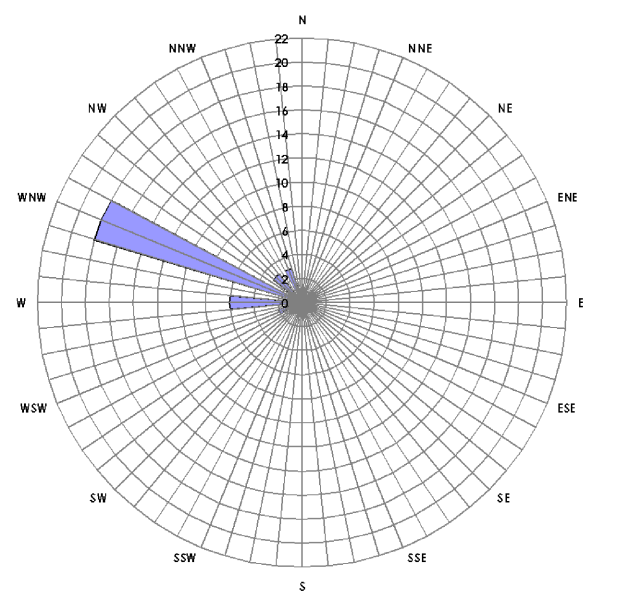


CITY:\Redd\DIV\GROUP\Redd\DB\Redd\LD\Opt\PIC\Opt\PM\Redd\PM\Files\2019\GWR\AK000\6489\01-DWG\96489-Figure 3-GWCM.dwg LAYOUT: 3 SAVED: 11/28/2019 4:54 PM ACADVER: 23.1S (LMS TECH) PAGES: 11 PLOTTED: 12/13/2019 4:57 PM BY: N. BALA



**LEGEND:**

- MW-4 GROUNDWATER MONITORING WELL
- MW-3 ABANDONED GROUNDWATER MONITORING WELL
- (113.42) GROUNDWATER ELEVATION (FEET)
- 113.25 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 0.0035 FT/FT APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)



**SOURCE:**  
 BASE MAP 'SITE PLAN' (96489-940418(034)GN-WA002[1].DWG), PROVIDED BY 'GHD' MAP DATE 11/20/18, SCALE 1"=40'.



CHEVRON-BRANDED SERVICE STATION 96489  
 1304 AIRPORT HEIGHTS DRIVE  
 ANCHORAGE, ALASKA

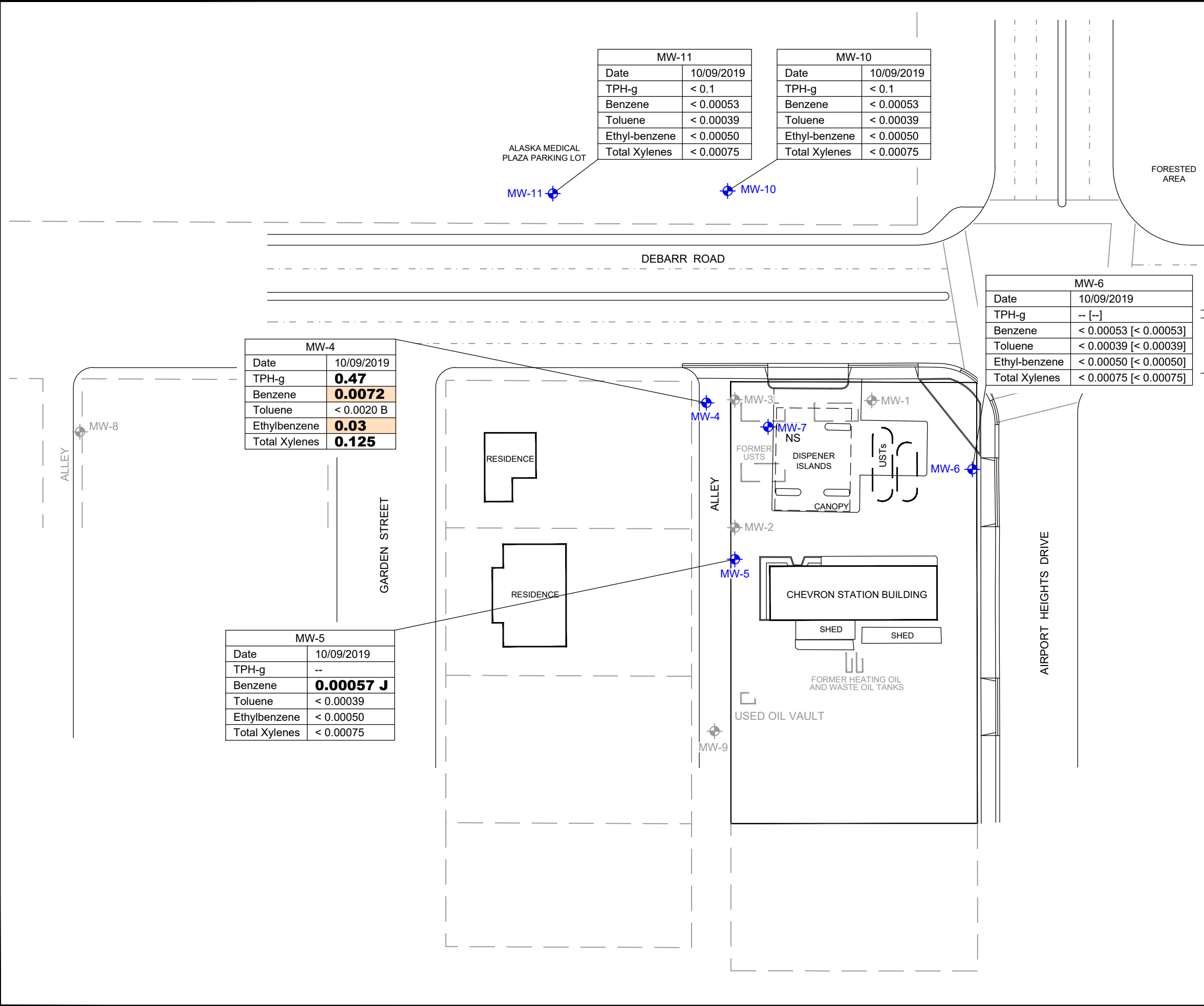
**GROUNDWATER ELEVATION  
 CONTOUR MAP  
 OCTOBER 9, 2019**

**ARCADIS** Design & Consultancy  
 for natural and built assets

FIGURE  
**3**



CITY:\Redd\DIV\GROUP\Redd\DB\Redd\LD\Opt\ PIC\Opt\ PM\Redd\ LVR\Opt\ON\*OFF+REF\*  
 C:\Users\888888\BIM-360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\96489 - Anchorage\2019\GWR\AK000646801-DWG\96489-Figure 4-GWAM.dwg LAYOUT: 4 - Saved: 11/29/2019 7:00 PM ACADVER: 23.15 (LMS TECH) PAGES: 4 PLOTSTYLETABLE: --- PLOTTED: 12/13/2019 4:54 PM BY: N. BALA



- LEGEND:**
- MW-4 GROUNDWATER MONITORING WELL
  - MW-3 ABANDONED GROUNDWATER MONITORING WELL
  - TPH-g TOTAL PETROLEUM HYDROCARBONS, AS GASOLINE RANGE
  - [< 0.00053] DUPLICATE SAMPLE RESULT
  - <0.001 NOT DETECTED AT OR ABOVE THE METHOD DETECTION LIMIT (MDL)
  - J THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY
  - B COMPOUND CONSIDERED NON-DETECT AT LISTED VALUE DUE TO ASSOCIATED METHOD BLANK CONTAMINATION
  - BOLD** VALUE INDICATES CONCENTRATION ABOVE THE ADEC GROUNDWATER CLEANUP LEVELS
  - BOLD** VALUE EXCEEDS ADEC GROUNDWATER CLEANUP LEVEL
  - ADEC ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
  - NS NOT SAMPLED

WELL ID: MW-4

Date	10/09/2019
TPH-g	<b>0.47</b>
Benzene	<b>0.0072</b>
Toluene	< 0.0020 B
Ethylbenzene	<b>0.03</b>
Total Xylenes	<b>0.125</b>

CONCENTRATION IN (mg/L)

ANALYTE

**NOTE:**

- ALL CONCENTRATIONS ARE IN MILLIGRAMS PER LITER (mg/L)

0 50' 100'

APPROXIMATE SCALE : 1 in. = 50 ft.

CHEVRON-BRANDED SERVICE STATION 96489  
 1304 AIRPORT HEIGHTS DRIVE  
 ANCHORAGE, ALASKA

**GROUNDWATER ANALYTICAL MAP**  
**OCTOBER 9, 2019**

**ARCADIS** Design & Consultancy for natural and built assets

FIGURE 4

# APPENDIX A

## Site Background and History



**Chevron Environmental  
Management Company**

## **Appendix A:**

### **Site History and Background**

**Chevron Facility 96489**  
1304 Airport Heights Drive  
Anchorage, Alaska  
ADEC File No: 2100.26.066  
HAZARD ID No: 23518

December 27, 2019

## Appendix A: 96489 Site Description and Background

# 1 96489 SITE BACKGROUND AND HISTORY

## 1.1 Site Description and Vicinity

Chevron facility 96489 is located at 1304 Airport Heights Drive in Anchorage, Alaska. The site is currently a Chevron-branded service station with two underground storage tanks (UST), dispenser islands, product piping and a station building with three auto service bays. The surrounding properties are mixed commercial and residential; the site is south of the Alaska Regional Hospital across Debarr Road, and is bordered by residences to the east, south and west.

# 2 SITE CHARACTERIZATION

There are currently three groundwater monitoring wells located onsite (MW-5 through MW-7) and three groundwater monitoring wells located offsite (MW-4, MW-10 and MW-11).

# 3 CURRENT SITE MONITORING ACTIVITIES

The site currently has a network of 6 groundwater monitoring wells located onsite (MW-5 through MW-7) and offsite (MW-4, MW-10 and MW-11) which are monitored and sampled semiannually.

In recent historic sampling, concentrations of gasoline-range organics (GRO), benzene, ethylbenzene, and total xylene have exceeded ADEC TLs in MW-4 and MW-7. Concentrations of benzene have also historically exceeded ADEC TLs in well MW-6. Historically, no concentrations of hydrocarbons have been detected above ADEC TLs in downgradient wells MW-10 and MW-11.

# 4 GEOLOGY AND HYDROGEOLOGY

## 4.1 Site Hydrogeology

The site is in south central Alaska, south of the Knik Arm and north of the Turnagain Arm of Cook Inlet. Static groundwater depths from 1999 to the present have ranged between 24.94 to 29.39 feet below top of casing (ft btoc). Historic groundwater flow is to the northwest.

## 5 REFERENCES

GHD Inc. 2018. Second Semiannual 2018 Groundwater Monitoring Report: Chevron-Branded Service Station 96489, 1304 Airport Heights Drive, Anchorage, AK. November 20.

# APPENDIX B

Field Data Sheets



# Daily Log

Project Name 96489 Project Number 96489 Page 1 of 1

Site Location 1304 Airport Heights Dr. Anchorage AK Date \_\_\_\_\_

Field Personnel D. Brundain, E. Wujcik  
2SA19 GW sampling event

Time	Description of Activities				
0830	Arrive on site, contact PM				
0845	Gauge wells as we wait for Statewide to arrive				
	Well ID	PID	DTW	TD	notes
	MW-4	0.0	25.95	34.7	
	MW-5	0.0	27.32	37.1	
	MW-6	2.0	26.59	35.8	
	MW-7	0.0	26.68	36.5	cannot be sampled
	MW-10	0.0	28.38	38.6	
	MW-11	0.0	27.80	37.3	
	Lane closure performed for sampling MW-4				
	BD-1-W-11009 collected at MW-6				
	All wells sampled for BTEX 8260				
	MW-10, MW-11, MW-4, MW-7 additionally sampled for GRO AK101				
	MW-7 was not sampled due to sediment in the well. The sediment was clogging the bladder, pump, and tubing. Water was unable to be purged out of the well due to the sediment build up.				
1230	Depart site				

**GROUNDWATER SAMPLING FORM**



Project No. 96489 Well ID MW-10 Date 10.9.19  
 Project Name/Location 1304 Airport Heights Anchorage AK Weather 40°  
 Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC  
SS  
 Static Water Level (ft-bmp) 28.38 Total Depth (ft-bmp) 39.6 Water Column (ft) 10.2 Gallons in Well 1.63  
 MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Sample Method Low Flow  
 Pump On/Off 1150/1215 Volumes Purged — Centrifugal — Submersible — Other Bladder  
 Sample Time: Label 1210 Gallons Purged 2400 Replicate/Code No. — Sampled by EW  
 Purge Start 1153  
 Purge End 1202

Time	Minutes Elapsed	Rate (gpm)(mL/min) 200mL/min ±	Depth to Water (ft) -0.3	Gallons Purged	pH ±0.1	Cond. (µmhos)(mS/cm) ±5%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (°C)(°F) ±0.5%	Redox (mV) ±10mV	Appearance								
											Color	Odor							
1153	3	200	28.38	600	6.44	0.481	873	5.00	7.66	134									
1156	6	200	28.38	1200	6.49	0.478	806	4.60	7.61	134									
1159	9	200	28.38	1800	6.51	0.477	800	4.44	7.58	135									
1202	12	200	28.38	2400	6.53	0.478	787	4.21	7.56	135									
Stabilization Calculations (±)																			
Stabilization Criteria												±0.1 s.u.	±5%	±10% or within 1 NTU of	±10%	±1%	±10 mV		

(3) Turbidity ≤ 20 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU.

Constituents Sampled	Container	Number	Preservative
BTEX 8260	40mL VOA	3	HCl
GRD AK 101	40mL VOA	3	HCl

Comments

**Well Casing Volumes**

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

**Well Information**

Well Location: see site map Well Locked at Arrival: Yes / No  
 Condition of Well: Good Well Locked at Departure: Yes / No  
 Well Completion: Flush Mount / Stick Up Key Number To Well: 3910



**GROUNDWATER SAMPLING FORM**



Project No. 96489 Well ID MW-11 Date 10.9.19  
 Project Name/Location 1304 Airport Heights Anchorage AK Weather 40°  
 Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material X PVC — SS  
 Static Water Level (ft-bmp) 27.80 Total Depth (ft-bmp) 37.3 Water Column (ft) 9.5 Gallons in Well 1.52  
 MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Sample Method Low Flow  
 Pump On/Off 1120/1145 Volumes Purged — Centrifugal — Submersible — Other Bladder  
 Sample Time: Label 1140 Gallons Purged 2400 Replicate/Code No. — Sampled by EW  
 Purge Start 1123  
 Purge End 1132

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min ±	Depth to Water (ft) -0.3	Gallons Purged	pH ± 0.1	Cond. (µMhos)/(mS/cm) ± 3%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (C/F) ± 0.5	Redox (mV) ± 10mV	Appearance								
											Color	Odor							
1123	3	200	27.80	600	6.39	0.490	786	5.83	7.55	113									
<del>1123</del> 1126	6	200	27.80	1200	6.39	0.492	796	5.63	7.53	116									
<del>1126</del> 1129	9	200	27.80	1800	6.44	0.493	831	5.57	7.5	117									
1132	12	200	27.80	2400	6.44	0.494	866	5.55	7.48	118									
Stabilization Calculations (±)																			
Stabilization Criteria												± 0.1 pH	± 3%	± 10% or within 1 NTU of	± 10%	± 0.5	± 10 mV		

(3) Turbidity ± 50 NTU and ± 10% or within 1 NTU of a previous reading when < 30 NTU

Constituents Sampled	Container	Number	Preservative
BTEX 8260	40 mL VOA	3	HCl
GRD AK 101	40 mL VOA	3	HCl

Comments

Well Casing Volumes  
 Gallons/Foot 1" = 0.04 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

**Well Information**

Well Location: see site map Well Locked at Arrival: Yes / No  
 Condition of Well: good Well Locked at Departure: Yes / No  
 Well Completion: Flush Mount / Stick Up Key Number To Well: —

**GROUNDWATER SAMPLING FORM**



Project No. 96489 Well ID MW-4 Date 10.9.19  
 Project Name/Location 1304 Airport Heights Anchorage AK Weather 40°  
 Measuring Pt. Description TOC Screen Setting (ft-bmp) — Casing Diameter (in.) 2 Well Material  PVC  SS  
 Static Water Level (ft-bmp) 25.95 Total Depth (ft-bmp) 34.7 Water Column (ft) 8.75 Gallons in Well 1.4  
 MP Elevation — Pump Intake (ft-bmp) ~2 Purge Method: Low Flow Sample Method Low Flow  
 Pump On/Off 1055 / 1115 Volumes Purged — Centrifugal  Submersible  Other Bladder  
 Sample Time: Label 116 mL Gallons Purged 2400 Replicate/Code No. — Sampled by EW  
 Purge Start 1058  
 Purge End 1107

Time	Minutes Elapsed	Rate (gpm) (ft <sup>3</sup> /min) ± 20%	Depth to Water (ft) ± 0.3	Gallons Purged	pH ± 0.1	Cond. (µmhos/cm) (mg/L) ± 2%	Turbidity (NTU) ± 10%	DO (mg/L) ± 10%	Temp. (°C/°F) ± 0.5%	Redox (mV) ± 10mV	Appearance						
											Color	Odor					
1058	3	200	25.95	600	6.58	0.445	302	5.10	7.58	70							
1101	6	200	25.95	1200	6.54	0.427	241	4.97	7.55	82							
1104	9	200	25.95	1800	6.49	0.422	210	4.91	7.53	86							
1107	12	200	25.95	2400	6.46	0.418	225	4.80	7.50	90							
Stabilization Calculations (±)																	
Stabilization Criteria											± 0.1 pH	± 2%	± 10%	± 0.5%	± 10 mV		

(1) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU.

Constituents Sampled	Container	Number	Preservative
BTEX 8260	40mL VOA	3	HCl
GR0 AK 101	40mL VOA	3	HCl

Comments

**Well Casing Volumes**

Gallons/Foot 1" = 0.04 1.25" = 0.06 1.5" = 0.09 2" = 0.16 2.5" = 0.26 3" = 0.37 3.5" = 0.50 4" = 0.65 6" = 1.47

**Well Information**

Well Location: See site map Well Locked at Arrival:  Yes /  No  
 Condition of Well: good Well Locked at Departure:  Yes /  No  
 Well Completion: Flush Mount / Stick Up Key Number To Well: 3910

# GROUNDWATER SAMPLING FORM



Project No. 96489 Well ID mw-5 Date 10.9.19  
 Project Name/Location 1304 Airport Heights Anchorage AK Weather 40°  
 Measuring Pt. Description TOC Screen Setting (n-bmp) — Casing Diameter (in.) 2 Well Material X PVC — SS  
 Static Water Level (n-bmp) 27.32 Total Depth (n-bmp) 37.1 Water Column (ft) 9.78 Gallons in Well 1.56  
 MP Elevation — Pump Intake (n-bmp) ~2 Purge Method: Low Flow Sample Method Low Flow  
 Pump On/Off 1030 / 1050 Volumes Purged — Centrifugal — Submersible — Other Bladder  
 Sample Time: Label 1045 <sup>nL</sup> Gallons Purged 2400 Replicate/Code No. — Sampled by EW  
 Purge Start 1033 Purge End 1042

Time	Minutes Elapsed	Rate (gpm)/(ml/min) 200ml/min ±	Depth to Water (ft) -0.3	Gallons Purged	pH ±0.1	Cond. (µMhos/cm) ±2%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (C)(F) ±0.5%	Redox (mV) ±10mV	Appearance					
											Color	Odor				
1033	3	200	27.32	600	6.32	0.946	6000	0	8.14	125						
1036	6	200	27.32	1200	6.30	0.949	710	0	8.13	121						
1039	9	200	27.32	1800	6.28	0.951	414	0	8.12	118						
1042	12	200	27.32	2400	6.27	0.954	396	0	8.10	112						
Stabilization Calculations (±)																
Stabilization Criteria											±0.1 p.u.	±5%	±10% or within 1 mV	±10%	±5%	±10 mV

(3) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU.

Constituents Sampled	Container	Number	Preservative
BTEX 8260	40mL vOA	3	HCl

Comments

Well Casing Volumes

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.60	6" = 1.47
	1.25" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65	

Well Information

Well Location: sec. site map Well Locked at Arrival: Yes / No  
 Condition of Well: good Well Locked at Departure: Yes / No  
 Well Completion: Flush Mount / Stick Up Key Number To Well: 3710

**GROUNDWATER SAMPLING FORM**



Project No. 96487 Well ID mw-6 Page 1 of 1  
 Project Name/Location 1304 Airport Heights Anchorage AK Date 10.9.19  
 Measuring Pt. Description TOC Screen Setting (n-bmp) — Casing Diameter (in.) 2 Weather 40°  
 Static Water Level (n-bmp) 26.59 Total Depth (n-bmp) 35.8 Water Column (ft) 9.2 Gallons In Well 1.47  
 MP Elevation — Pump Intake (n-bmp) ~2 Purge Method: Low Flow Sample Method Low Flow  
 Pump On/Off 0915/0935 Volumes Purged — Centrifugal — Submersible — Other Bladder  
 Sample Time: Label 0930 Purge Start 0918 Purge End 0927 ml Gallons Purged 2400 Replicate/Code No. BD-1-W-19609 Sampled by EW

Time	Minutes Elapsed	Rate (gpm)/(mL/min) 200mL/min +	Depth to Water (ft) -0.3	Gallons Purged	pH ±0.1	Cond. (µMhos)/(µS/cm) ±3%	Turbidity (NTU) ±10%	DO (mg/L) ±10%	Temp. (C)(F) ±3%	Redox (mV) ±10mV	Appearance								
											Color	Odor							
0918	3	200	26.59	600	6.30	0.545	77	0.48	8.47	130									
0921	6	200	26.59	1200	6.32	0.543	77	0.25	8.42	129									
0924	9	200	26.59	1800	6.30	0.541	295	0.23	8.38	128									
0927	12	200	26.59	2400	6.31	0.540	176	0.20	8.36	127									
Stabilization Calculations (±)																			
Stabilization Criteria												±0.1 pH	±3%	±10% of within 1 min	±10%	±3%	±10 mV		

(3) Turbidity < 50 NTU and ±10% or within 1 NTU of a previous reading when <10 NTU

Constituents Sampled	Container	Number	Preservative
BTX 8260	40 mL VOA	3	HCl

Comments \_\_\_\_\_

**Well Casing Volumes**

Gallons/Foot	1" = 0.04	1.5" = 0.09	2.5" = 0.26	3.5" = 0.50	6" = 1.47
	1.25" = 0.05	2" = 0.16	3" = 0.37	4" = 0.65	

**Well Information**

Well Location: See site map  
 Condition of Well: Good  
 Well Completion: Flush Mount / Stick Up  
 Well Locked at Arrival: Yes / No  
 Well Locked at Departure: Yes / No  
 Key Number To Well: 3710

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Client Contact</b> Company Name: Arcadis Address: 11 SW Columbia St Suite 670 City/State/Zip: Portland OR 97201 Phone: 503-220-8201 Fax: — Project Name: Chevron 96489 Site: 1301 Airport Heights Anchorage AK PO # 30010563		<b>Project Manager:</b> Nicole Monroe Tel/Fax: 503-785-9414 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Site Contact:</b> David Brundin Lab Contact: Perform MS / MSD (Y / N) Filtered Sample (Y / N)		<b>Date:</b> 10.9.19 Carrier: COC No: 249685 Sampler: DB, EW For Lab Use Only: Walk-in Client: Lab Sampling: Job /SDG No.:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
EQB-1-W-191009	10.9.19	0900	G	W	6		
MW-6-W-191009	10.9.19	1930	G	W	3		
MW-5-W-191009	10.9.19	1045	G	W	3		
MW-4-W-191009	10.9.19	1116	G	W	6		
MW-11-W-191009	10.9.19	1140	G	W	6		
MW-10-W-191009	10.9.19	1210	G	W	6		
BD-1-W-191009	10.9.19	—	G	W	3		
Trip Blank	—	—	—	W	6		

**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

**Special Instructions/QC Requirements & Comments:**  
 Type III Data Package

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Custody Seal No.:  
 Relinquished by: E. Nij  
 Relinquished by: Arcadis  
 Relinquished by: Arcadis

Received by: Arcadis  
 Received by: T.A. AK  
 Received in Laboratory by: Company:

Date/Time: 10.9.19 1245  
 Date/Time: 10/9/19 12:45  
 Date/Time: Company:

# APPENDIX C

Laboratory Analytical Report



## ANALYTICAL REPORT

Job Number: 580-89872-1

Job Description: Chevron Site 96489 Anchorage, Alaska

For:  
ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, OR 97201  
Attention: Daniel Morel



Approved for release.  
Kristine D Allen  
Manager of Project Management  
10/15/2019 3:34 PM

---

Designee for  
Elaine M Walker, Project Manager II  
5755 8th Street East, Tacoma, WA, 98424  
(253)248-4972  
elaine.walker@testamericainc.com  
10/15/2019

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The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted in the case narrative.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

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.

**Eurofins TestAmerica, Seattle**  
5755 8th Street East, Tacoma, WA 98424

Tel (253) 922-2310 Fax (253) 922-5047 [www.testamericainc.com](http://www.testamericainc.com)

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# Definitions/Glossary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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)

## CASE NARRATIVE

Client: ARCADIS U.S. Inc  
Project: Chevron Site 96489 Anchorage, Alaska  
Report Number: 580-89872-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **RECEIPT**

The samples were received on 10/09/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.8 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

### **VOLATILE ORGANIC COMPOUNDS (GC-MS)**

Samples EQB-1-W-191009 (580-89872-1), MW-6-W-191009 (580-89872-2), MW-5-W-191009 (580-89872-3), MW-4-W-191009 (580-89872-4), MW-11-W-191009 (580-89872-5), MW-10-W-191009 (580-89872-6), BD-1-W-191009 (580-89872-7) and Trip Blank (580-89872-8) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 10/11/2019.

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

### **GASOLINE RANGE ORGANICS**

Samples EQB-1-W-191009 (580-89872-1), MW-4-W-191009 (580-89872-4), MW-11-W-191009 (580-89872-5), MW-10-W-191009 (580-89872-6) and Trip Blank (580-89872-8) were analyzed for gasoline range organics in accordance with State of Alaska Method AK101. The samples were analyzed on 10/12/2019 and 10/13/2019.

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

# Detection Summary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Client Sample ID: EQB-1-W-191009

Lab Sample ID: 580-89872-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.54	J	2.0	0.39	ug/L	1		8260C	Total/NA

## Client Sample ID: MW-6-W-191009

Lab Sample ID: 580-89872-2

No Detections.

## Client Sample ID: MW-5-W-191009

Lab Sample ID: 580-89872-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	3.0	0.53	ug/L	1		8260C	Total/NA

## Client Sample ID: MW-4-W-191009

Lab Sample ID: 580-89872-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.2		3.0	0.53	ug/L	1		8260C	Total/NA
Toluene	0.52	J	2.0	0.39	ug/L	1		8260C	Total/NA
Ethylbenzene	30		3.0	0.50	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	110		3.0	0.75	ug/L	1		8260C	Total/NA
o-Xylene	15		2.0	0.39	ug/L	1		8260C	Total/NA
Gasoline Range Organics (GRO) -C6-C10	0.47		0.25	0.10	mg/L	1		AK101	Total/NA

## Client Sample ID: MW-11-W-191009

Lab Sample ID: 580-89872-5

No Detections.

## Client Sample ID: MW-10-W-191009

Lab Sample ID: 580-89872-6

No Detections.

## Client Sample ID: BD-1-W-191009

Lab Sample ID: 580-89872-7

No Detections.

## Client Sample ID: Trip Blank

Lab Sample ID: 580-89872-8

No Detections.

This Detection Summary does not include radiochemical test results.

# Client Sample Results

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: EQB-1-W-191009**

**Lab Sample ID: 580-89872-1**

Date Collected: 10/09/19 09:00

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 14:06	1
<b>Toluene</b>	<b>0.54</b>	<b>J</b>	2.0	0.39	ug/L			10/11/19 14:06	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 14:06	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 14:06	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 120		10/11/19 14:06	1
Trifluorotoluene (Surr)	102		80 - 120		10/11/19 14:06	1
4-Bromofluorobenzene (Surr)	99		80 - 120		10/11/19 14:06	1
Dibromofluoromethane (Surr)	97		80 - 120		10/11/19 14:06	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 126		10/11/19 14:06	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/12/19 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	116		50 - 150		10/12/19 16:13	1
4-Bromofluorobenzene (Surr)	95		50 - 150		10/12/19 16:13	1

**Client Sample ID: MW-6-W-191009**

**Lab Sample ID: 580-89872-2**

Date Collected: 10/09/19 09:30

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 14:30	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 14:30	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 14:30	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 14:30	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 14:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		10/11/19 14:30	1
Trifluorotoluene (Surr)	101		80 - 120		10/11/19 14:30	1
4-Bromofluorobenzene (Surr)	97		80 - 120		10/11/19 14:30	1
Dibromofluoromethane (Surr)	97		80 - 120		10/11/19 14:30	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 126		10/11/19 14:30	1

**Client Sample ID: MW-5-W-191009**

**Lab Sample ID: 580-89872-3**

Date Collected: 10/09/19 10:45

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>0.57</b>	<b>J</b>	3.0	0.53	ug/L			10/11/19 14:55	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 14:55	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 14:55	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 14:55	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 14:55	1

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# Client Sample Results

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: MW-5-W-191009**

**Lab Sample ID: 580-89872-3**

Date Collected: 10/09/19 10:45

Matrix: Water

Date Received: 10/09/19 12:45

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120		10/11/19 14:55	1
Trifluorotoluene (Surr)	100		80 - 120		10/11/19 14:55	1
4-Bromofluorobenzene (Surr)	103		80 - 120		10/11/19 14:55	1
Dibromofluoromethane (Surr)	97		80 - 120		10/11/19 14:55	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 126		10/11/19 14:55	1

**Client Sample ID: MW-4-W-191009**

**Lab Sample ID: 580-89872-4**

Date Collected: 10/09/19 11:10

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.2		3.0	0.53	ug/L			10/11/19 15:20	1
Toluene	0.52	J	2.0	0.39	ug/L			10/11/19 15:20	1
Ethylbenzene	30		3.0	0.50	ug/L			10/11/19 15:20	1
m-Xylene & p-Xylene	110		3.0	0.75	ug/L			10/11/19 15:20	1
o-Xylene	15		2.0	0.39	ug/L			10/11/19 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 120		10/11/19 15:20	1
Trifluorotoluene (Surr)	100		80 - 120		10/11/19 15:20	1
4-Bromofluorobenzene (Surr)	100		80 - 120		10/11/19 15:20	1
Dibromofluoromethane (Surr)	94		80 - 120		10/11/19 15:20	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 126		10/11/19 15:20	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	0.47		0.25	0.10	mg/L			10/13/19 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		50 - 150		10/13/19 13:31	1
4-Bromofluorobenzene (Surr)	102		50 - 150		10/13/19 13:31	1

**Client Sample ID: MW-11-W-191009**

**Lab Sample ID: 580-89872-5**

Date Collected: 10/09/19 11:40

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 15:45	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 15:45	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 15:45	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 15:45	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 120		10/11/19 15:45	1
Trifluorotoluene (Surr)	100		80 - 120		10/11/19 15:45	1
4-Bromofluorobenzene (Surr)	104		80 - 120		10/11/19 15:45	1
Dibromofluoromethane (Surr)	94		80 - 120		10/11/19 15:45	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 126		10/11/19 15:45	1

# Client Sample Results

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: MW-11-W-191009**

**Lab Sample ID: 580-89872-5**

**Date Collected: 10/09/19 11:40**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/13/19 14:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		50 - 150					10/13/19 14:01	1
4-Bromofluorobenzene (Surr)	98		50 - 150					10/13/19 14:01	1

**Client Sample ID: MW-10-W-191009**

**Lab Sample ID: 580-89872-6**

**Date Collected: 10/09/19 12:10**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 16:10	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 16:10	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 16:10	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 16:10	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 16:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120					10/11/19 16:10	1
Trifluorotoluene (Surr)	102		80 - 120					10/11/19 16:10	1
4-Bromofluorobenzene (Surr)	97		80 - 120					10/11/19 16:10	1
Dibromofluoromethane (Surr)	97		80 - 120					10/11/19 16:10	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 126					10/11/19 16:10	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/13/19 14:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	113		50 - 150					10/13/19 14:31	1
4-Bromofluorobenzene (Surr)	96		50 - 150					10/13/19 14:31	1

**Client Sample ID: BD-1-W-191009**

**Lab Sample ID: 580-89872-7**

**Date Collected: 10/09/19 00:01**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 16:34	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 16:34	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 16:34	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 16:34	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120					10/11/19 16:34	1
Trifluorotoluene (Surr)	99		80 - 120					10/11/19 16:34	1
4-Bromofluorobenzene (Surr)	100		80 - 120					10/11/19 16:34	1
Dibromofluoromethane (Surr)	95		80 - 120					10/11/19 16:34	1

# Client Sample Results

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: BD-1-W-191009**

**Lab Sample ID: 580-89872-7**

Date Collected: 10/09/19 00:01

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 126		10/11/19 16:34	1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 580-89872-8**

Date Collected: 10/09/19 00:01

Matrix: Water

Date Received: 10/09/19 12:45

**Method: 8260C - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 13:41	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 13:41	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 13:41	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 13:41	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 13:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		10/11/19 13:41	1
Trifluorotoluene (Surr)	99		80 - 120		10/11/19 13:41	1
4-Bromofluorobenzene (Surr)	96		80 - 120		10/11/19 13:41	1
Dibromofluoromethane (Surr)	96		80 - 120		10/11/19 13:41	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 126		10/11/19 13:41	1

**Method: AK101 - Alaska - Gasoline Range Organics (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/12/19 16:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	117		50 - 150		10/12/19 16:44	1
4-Bromofluorobenzene (Surr)	93		50 - 150		10/12/19 16:44	1



# Default Detection Limits

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
Benzene	3.0	0.53	ug/L
Ethylbenzene	3.0	0.50	ug/L
m-Xylene & p-Xylene	3.0	0.75	ug/L
o-Xylene	2.0	0.39	ug/L
Toluene	2.0	0.39	ug/L

## Method: AK101 - Alaska - Gasoline Range Organics (GC)

Analyte	RL	MDL	Units
Gasoline Range Organics (GRO)-C6-C10	0.25	0.10	mg/L

# Surrogate Summary

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)				
		TOL (80-120)	TFT (80-120)	BFB (80-120)	DBFM (80-120)	DCA (80-126)
580-89872-1	EQB-1-W-191009	105	102	99	97	104
580-89872-2	MW-6-W-191009	102	101	97	97	103
580-89872-3	MW-5-W-191009	104	100	103	97	99
580-89872-4	MW-4-W-191009	104	100	100	94	101
580-89872-5	MW-11-W-191009	107	100	104	94	101
580-89872-6	MW-10-W-191009	102	102	97	97	101
580-89872-7	BD-1-W-191009	102	99	100	95	98
580-89872-8	Trip Blank	101	99	96	96	99
LCS 580-314028/3	Lab Control Sample	101	99	99	98	101
LCSD 580-314028/4	Lab Control Sample Dup	105	99	104	98	101
MB 580-314028/6	Method Blank	101	102	100	98	103

### Surrogate Legend

TOL = Toluene-d8 (Surr)  
 TFT = Trifluorotoluene (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)  
 DBFM = Dibromofluoromethane (Surr)  
 DCA = 1,2-Dichloroethane-d4 (Surr)

## Method: AK101 - Alaska - Gasoline Range Organics (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TFT1 (50-150)	BFB1 (50-150)
580-89872-1	EQB-1-W-191009	116	95
580-89872-4	MW-4-W-191009	113	102
580-89872-5	MW-11-W-191009	113	98
580-89872-6	MW-10-W-191009	113	96
580-89872-8	Trip Blank	117	93
LCS 580-314105/6	Lab Control Sample	110	97
LCS 580-314127/6	Lab Control Sample	110	96
LCSD 580-314105/7	Lab Control Sample Dup	107	97
LCSD 580-314127/7	Lab Control Sample Dup	106	95
MB 580-314105/5	Method Blank	116	95
MB 580-314127/5	Method Blank	117	96

### Surrogate Legend

TFT = Trifluorotoluene (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

# QC Sample Results

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Method: 8260C - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 580-314028/6**

**Matrix: Water**

**Analysis Batch: 314028**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			10/11/19 12:50	1
Toluene	ND		2.0	0.39	ug/L			10/11/19 12:50	1
Ethylbenzene	ND		3.0	0.50	ug/L			10/11/19 12:50	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			10/11/19 12:50	1
o-Xylene	ND		2.0	0.39	ug/L			10/11/19 12:50	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		10/11/19 12:50	1
Trifluorotoluene (Surr)	102		80 - 120		10/11/19 12:50	1
4-Bromofluorobenzene (Surr)	100		80 - 120		10/11/19 12:50	1
Dibromofluoromethane (Surr)	98		80 - 120		10/11/19 12:50	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 126		10/11/19 12:50	1

**Lab Sample ID: LCS 580-314028/3**

**Matrix: Water**

**Analysis Batch: 314028**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.73		ug/L		97	75 - 121
Toluene	10.0	9.51		ug/L		95	80 - 120
Ethylbenzene	10.0	9.50		ug/L		95	80 - 120
m-Xylene & p-Xylene	10.0	9.67		ug/L		97	80 - 120
o-Xylene	10.0	9.71		ug/L		97	80 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
Trifluorotoluene (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 126

**Lab Sample ID: LCSD 580-314028/4**

**Matrix: Water**

**Analysis Batch: 314028**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	10.0	10.3		ug/L		103	75 - 121	6	14
Toluene	10.0	10.3		ug/L		103	80 - 120	8	19
Ethylbenzene	10.0	10.4		ug/L		104	80 - 120	9	14
m-Xylene & p-Xylene	10.0	10.4		ug/L		104	80 - 120	8	14
o-Xylene	10.0	10.8		ug/L		108	80 - 120	11	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 120
Trifluorotoluene (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120

# QC Sample Results

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCSD 580-314028/4**  
**Matrix: Water**  
**Analysis Batch: 314028**

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

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 126

## Method: AK101 - Alaska - Gasoline Range Organics (GC)

**Lab Sample ID: MB 580-314105/5**  
**Matrix: Water**  
**Analysis Batch: 314105**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/12/19 14:42	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	116		50 - 150					10/12/19 14:42	1
4-Bromofluorobenzene (Surr)	95		50 - 150					10/12/19 14:42	1

**Lab Sample ID: LCS 580-314105/6**  
**Matrix: Water**  
**Analysis Batch: 314105**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C10	1.00	0.976		mg/L		98	77 - 123
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
Trifluorotoluene (Surr)	110		50 - 150				
4-Bromofluorobenzene (Surr)	97		50 - 150				

**Lab Sample ID: LCSD 580-314105/7**  
**Matrix: Water**  
**Analysis Batch: 314105**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.982		mg/L		98	77 - 123	1	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Trifluorotoluene (Surr)	107		50 - 150						
4-Bromofluorobenzene (Surr)	97		50 - 150						

**Lab Sample ID: MB 580-314127/5**  
**Matrix: Water**  
**Analysis Batch: 314127**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) -C6-C10	ND		0.25	0.10	mg/L			10/13/19 11:29	1

# QC Sample Results

Client: ARCADIS U.S. Inc  
 Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Method: AK101 - Alaska - Gasoline Range Organics (GC) (Continued)

**Lab Sample ID: MB 580-314127/5**  
**Matrix: Water**  
**Analysis Batch: 314127**

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Trifluorotoluene (Surr)	117		50 - 150		10/13/19 11:29	1
4-Bromofluorobenzene (Surr)	96		50 - 150		10/13/19 11:29	1

**Lab Sample ID: LCS 580-314127/6**  
**Matrix: Water**  
**Analysis Batch: 314127**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.991		mg/L		99	77 - 123		

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Trifluorotoluene (Surr)	110		50 - 150
4-Bromofluorobenzene (Surr)	96		50 - 150

**Lab Sample ID: LCSD 580-314127/7**  
**Matrix: Water**  
**Analysis Batch: 314127**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C6-C10	1.00	0.987		mg/L		99	77 - 123	0	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Trifluorotoluene (Surr)	106		50 - 150
4-Bromofluorobenzene (Surr)	95		50 - 150

# QC Association Summary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## GC/MS VOA

### Analysis Batch: 314028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89872-1	EQB-1-W-191009	Total/NA	Water	8260C	
580-89872-2	MW-6-W-191009	Total/NA	Water	8260C	
580-89872-3	MW-5-W-191009	Total/NA	Water	8260C	
580-89872-4	MW-4-W-191009	Total/NA	Water	8260C	
580-89872-5	MW-11-W-191009	Total/NA	Water	8260C	
580-89872-6	MW-10-W-191009	Total/NA	Water	8260C	
580-89872-7	BD-1-W-191009	Total/NA	Water	8260C	
580-89872-8	Trip Blank	Total/NA	Water	8260C	
MB 580-314028/6	Method Blank	Total/NA	Water	8260C	
LCS 580-314028/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-314028/4	Lab Control Sample Dup	Total/NA	Water	8260C	

## GC VOA

### Analysis Batch: 314105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89872-1	EQB-1-W-191009	Total/NA	Water	AK101	
580-89872-8	Trip Blank	Total/NA	Water	AK101	
MB 580-314105/5	Method Blank	Total/NA	Water	AK101	
LCS 580-314105/6	Lab Control Sample	Total/NA	Water	AK101	
LCSD 580-314105/7	Lab Control Sample Dup	Total/NA	Water	AK101	

### Analysis Batch: 314127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89872-4	MW-4-W-191009	Total/NA	Water	AK101	
580-89872-5	MW-11-W-191009	Total/NA	Water	AK101	
580-89872-6	MW-10-W-191009	Total/NA	Water	AK101	
MB 580-314127/5	Method Blank	Total/NA	Water	AK101	
LCS 580-314127/6	Lab Control Sample	Total/NA	Water	AK101	
LCSD 580-314127/7	Lab Control Sample Dup	Total/NA	Water	AK101	

# Lab Chronicle

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: EQB-1-W-191009**

**Lab Sample ID: 580-89872-1**

**Date Collected: 10/09/19 09:00**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 14:06	CJ	TAL SEA
Total/NA	Analysis	AK101		1	314105	10/12/19 16:13	BS	TAL SEA

**Client Sample ID: MW-6-W-191009**

**Lab Sample ID: 580-89872-2**

**Date Collected: 10/09/19 09:30**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 14:30	CJ	TAL SEA

**Client Sample ID: MW-5-W-191009**

**Lab Sample ID: 580-89872-3**

**Date Collected: 10/09/19 10:45**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 14:55	CJ	TAL SEA

**Client Sample ID: MW-4-W-191009**

**Lab Sample ID: 580-89872-4**

**Date Collected: 10/09/19 11:10**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 15:20	CJ	TAL SEA
Total/NA	Analysis	AK101		1	314127	10/13/19 13:31	BS	TAL SEA

**Client Sample ID: MW-11-W-191009**

**Lab Sample ID: 580-89872-5**

**Date Collected: 10/09/19 11:40**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 15:45	CJ	TAL SEA
Total/NA	Analysis	AK101		1	314127	10/13/19 14:01	BS	TAL SEA

**Client Sample ID: MW-10-W-191009**

**Lab Sample ID: 580-89872-6**

**Date Collected: 10/09/19 12:10**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 16:10	CJ	TAL SEA
Total/NA	Analysis	AK101		1	314127	10/13/19 14:31	BS	TAL SEA

# Lab Chronicle

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

**Client Sample ID: BD-1-W-191009**

**Lab Sample ID: 580-89872-7**

**Date Collected: 10/09/19 00:01**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 16:34	CJ	TAL SEA

**Client Sample ID: Trip Blank**

**Lab Sample ID: 580-89872-8**

**Date Collected: 10/09/19 00:01**

**Matrix: Water**

**Date Received: 10/09/19 12:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	314028	10/11/19 13:41	CJ	TAL SEA
Total/NA	Analysis	AK101		1	314105	10/12/19 16:44	BS	TAL SEA

**Laboratory References:**

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



# Accreditation/Certification Summary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

## Laboratory: Eurofins TestAmerica, Seattle

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20

# Method Summary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SEA
AK101	Alaska - Gasoline Range Organics (GC)	ADEC	TAL SEA
5030B	Purge and Trap	SW846	TAL SEA

**Protocol References:**

ADEC = Alaska Department of Environmental Conservation

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# Sample Summary

Client: ARCADIS U.S. Inc  
Project/Site: Chevron Site 96489 Anchorage, Alaska

Job ID: 580-89872-1

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89872-1	EQB-1-W-191009	Water	10/09/19 09:00	10/09/19 12:45	
580-89872-2	MW-6-W-191009	Water	10/09/19 09:30	10/09/19 12:45	
580-89872-3	MW-5-W-191009	Water	10/09/19 10:45	10/09/19 12:45	
580-89872-4	MW-4-W-191009	Water	10/09/19 11:10	10/09/19 12:45	
580-89872-5	MW-11-W-191009	Water	10/09/19 11:40	10/09/19 12:45	
580-89872-6	MW-10-W-191009	Water	10/09/19 12:10	10/09/19 12:45	
580-89872-7	BD-1-W-191009	Water	10/09/19 00:01	10/09/19 12:45	
580-89872-8	Trip Blank	Water	10/09/19 00:01	10/09/19 12:45	

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: IC 580-311491/2 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 11:32 Lab File ID: 091819\_0007.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	4.45	Assign Peak	ruslander a	09/18/19 12:35
Vinyl chloride	4.69	Assign Peak	ruslander a	09/18/19 12:35
Butadiene	4.78	Assign Peak	ruslander a	09/18/19 12:35
Bromomethane	5.19	Assign Peak	ruslander a	09/18/19 12:35
Acrolein	5.99	Assign Peak	ruslander a	09/18/19 12:35
Isopropyl alcohol	6.11	Other	ruslander a	09/18/19 17:59
Isobutanol	8.36	Assign Peak	limwirojt	09/19/19 10:08
Ethyl acrylate	9.63	Peak assignment corrected	ruslander a	09/18/19 14:25
Methyl methacrylate	9.89	Assign Peak	ruslander a	09/18/19 12:37
Styrene	13.05	Peak assignment corrected	ruslander a	09/18/19 12:42
1,2,3-Trichloropropane	13.25	Assign Peak	ruslander a	09/18/19 12:38

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: IC 580-311491/3 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 11:57 Lab File ID: 091819\_0008.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	4.14	Assign Peak	ruslander a	09/18/19 12:38
Chloromethane	4.45	Assign Peak	ruslander a	09/18/19 12:39
Vinyl chloride	4.70	Assign Peak	ruslander a	09/18/19 12:39
Butadiene	4.79	Assign Peak	ruslander a	09/18/19 12:39
Isopropyl alcohol	6.07	Baseline	ruslander a	09/18/19 18:00
Acetone	6.13	Baseline	ruslander a	09/18/19 18:05
2-Chloro-1,3-butadiene	7.91	Assign Peak	ruslander a	09/18/19 12:40
Ethyl acetate	8.21	Assign Peak	ruslander a	09/18/19 12:40
Isobutanol	8.33	Peak assignment corrected	limwirojt	09/19/19 09:48
Ethyl acrylate	9.63	Assign Peak	ruslander a	09/18/19 12:41
n-Heptane	9.64	Assign Peak	ruslander a	09/18/19 12:41
2-Nitropropane	9.76	Assign Peak	ruslander a	09/18/19 12:41
Methyl methacrylate	9.89	Assign Peak	ruslander a	09/18/19 12:41
Styrene	13.05	Assign Peak	ruslander a	09/18/19 12:42
1,2,3-Trichloropropane	13.26	Peak assignment corrected	limwirojt	09/19/19 10:14

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: IC 580-311491/4 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 12:21 Lab File ID: 091819\_0009.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.06	Baseline	ruslander a	09/18/19 18:00
Acetone	6.12	Baseline	ruslander a	09/18/19 18:05
2-Chloro-1,3-butadiene	7.90	Peak assignment corrected	ruslander a	09/18/19 12:44
Methacrylonitrile	8.03	Peak assignment corrected	ruslander a	09/18/19 12:44
Ethyl acetate	8.21	Peak assignment corrected	ruslander a	09/18/19 12:44
Isobutanol	8.32	Peak assignment corrected	ruslander a	09/18/19 12:44
Ethyl acrylate	9.63	Peak assignment corrected	ruslander a	09/18/19 14:24
n-Heptane	9.64	Peak assignment corrected	ruslander a	09/18/19 12:44
2-Nitropropane	9.76	Peak assignment corrected	ruslander a	09/18/19 12:44
Methyl methacrylate	9.88	Peak assignment corrected	ruslander a	09/18/19 12:44
1,2,3-Trichloropropane	13.25	Peak assignment corrected	ruslander a	09/18/19 12:45

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: IC 580-311491/5 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 12:47 Lab File ID: 091819\_0010.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.06	Baseline	ruslander a	09/18/19 18:00
Acetone	6.13	Baseline	ruslander a	09/18/19 18:06
t-Butyl alcohol	6.59	Baseline	ruslander a	09/19/19 09:57
Ethyl acrylate	9.64	Peak assignment corrected	ruslander a	09/18/19 14:24

Lab Sample ID: IC 580-311491/6 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 13:11 Lab File ID: 091819\_0011.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.05	Peak assignment corrected	ruslander a	09/18/19 18:01
Acetone	6.12	Baseline	ruslander a	09/18/19 18:06
Ethyl acrylate	9.63	Peak assignment corrected	ruslander a	09/18/19 14:24
Chlorobenzene-d5	12.37	Baseline	ruslander a	09/18/19 14:22
1,3-Dichlorobenzene	14.63	Baseline	ruslander a	09/18/19 14:23

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: ICIS 580-311491/7 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 13:36 Lab File ID: 091819\_0012.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.07	Peak assignment corrected	ruslander a	09/18/19 17:59
Ethyl acrylate	9.63	Peak assignment corrected	ruslander a	09/18/19 14:24

Lab Sample ID: IC 580-311491/8 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 14:01 Lab File ID: 091819\_0013.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.07	Other	ruslander a	09/18/19 18:03
Acetone	6.12	Baseline	ruslander a	09/18/19 18:04
Isobutanol	8.32	Peak assignment corrected	ruslander a	09/18/19 14:25
Fluorobenzene (IS)	9.41	Other	ruslander a	09/18/19 18:03
Ethyl acrylate	9.63	Peak assignment corrected	ruslander a	09/18/19 14:25
n-Heptane	9.64	Peak assignment corrected	ruslander a	09/18/19 14:25
2-Nitropropane	9.76	Peak assignment corrected	ruslander a	09/18/19 14:25
Methyl methacrylate	9.89	Peak assignment corrected	ruslander a	09/18/19 14:25



## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491Lab Sample ID: IC 580-311491/9 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 14:26 Lab File ID: 091819\_0014.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.06	Peak assignment corrected	ruslander a	09/18/19 18:01
Chlorobenzene-d5	12.37	Split Peak	ruslander a	09/18/19 15:12

Lab Sample ID: IC 580-311491/11 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 16:24 Lab File ID: 091819\_0016.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.05	Peak assignment corrected	ruslander a	09/18/19 18:02
Ethyl methacrylate	11.06	Peak assignment corrected	limwirojt	09/19/19 11:15
n-Butyl acetate	11.47	Peak assignment corrected	limwirojt	09/19/19 11:15
Chlorobenzene-d5	12.37	Peak assignment corrected	ruslander a	09/18/19 17:02

Lab Sample ID: IC 580-311491/10 Client Sample ID: \_\_\_\_\_Date Analyzed: 09/18/19 17:14 Lab File ID: 091819\_0018.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isopropyl alcohol	6.05	Peak assignment corrected	ruslander a	09/18/19 18:02
Ethyl methacrylate	11.06	Peak assignment corrected	limwirojt	09/19/19 11:13
n-Butyl acetate	11.47	Peak assignment corrected	limwirojt	09/19/19 11:14
Chlorobenzene-d5	12.37	Peak assignment corrected	ruslander a	09/18/19 17:44

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 311491

Lab Sample ID: ICV 580-311491/13 Client Sample ID: \_\_\_\_\_

Date Analyzed: 09/18/19 18:03 Lab File ID: 091819\_0020.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol	6.58	Other	ruslander a	09/19/19 10:02

## GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Analysis Batch Number: 314028Lab Sample ID: CCVL 580-314028/5 Client Sample ID: \_\_\_\_\_Date Analyzed: 10/11/19 12:26 Lab File ID: 101119\_0006.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl methacrylate	9.88	Peak assignment corrected	jantanuc	10/14/19 08:28
1,1,2,2-Tetrachloroethane	13.11	Peak assignment corrected	jantanuc	10/14/19 08:28
1,2,3-Trichloropropane	13.25	Peak assignment corrected	jantanuc	10/14/19 08:28
1,2-Dibromo-3-Chloropropane	15.46	Peak assignment corrected	jantanuc	10/14/19 08:28

Lab Sample ID: 580-89872-8 Client Sample ID: Trip BlankDate Analyzed: 10/11/19 13:41 Lab File ID: 101119\_0008.D GC Column: DB-VRX ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
m-Xylene & p-Xylene	12.73	Peak assignment corrected	jantanuc	10/14/19 10:54

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
5X SUR/IS/TFT_00011							1,3-Dichloropropene, Total			
							TAH			
							Tentatively Identified Compound			
							Xylenes, Total			
							SURR/IS/TFT_00107	20 mL	Trifluorotoluene (Surr)	49.98 ppm
									1,2-Dichloroethane-d4 (Surr)	48.75 ppm
									1,4-Dichlorobenzene-d4	48.75 ppm
									4-Bromofluorobenzene (Surr)	48.75 ppm
									BFB	48.75 ppm
									Chlorobenzene-d5	48.75 ppm
.SURR/IS/TFT_00107	03/12/20	09/11/19	MeOH, Lot voarsurr/is_00048	25 mL	V-TFTStk_00037	625 uL	Trifluorotoluene (Surr)	249.9 ppm		
							VOARSURR/IS_00048	24.375 mL	1,2-Dichloroethane-d4 (Surr)	243.75 ppm
									1,4-Dichlorobenzene-d4	243.75 ppm
									4-Bromofluorobenzene (Surr)	243.75 ppm
									BFB	243.75 ppm
									Chlorobenzene-d5	243.75 ppm
									Dibromofluoromethane (Surr)	243.75 ppm
									Fluorobenzene (IS)	243.75 ppm
									TBA-d9 (IS)	4875 ppm
									Toluene-d8 (Surr)	243.75 ppm
..V-TFTStk_00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat_00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L		
...TFTneat_00014	03/31/21		Sigma-Aldrich, Lot STBG2214V		(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L		
..VOARSURR/IS_00048	10/31/22		Restek, Lot A0131478		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	250 ug/mL		
							1,4-Dichlorobenzene-d4	250 ug/mL		
							4-Bromofluorobenzene (Surr)	250 ug/mL		
							BFB	250 ug/mL		
							Chlorobenzene-d5	250 ug/mL		
							Dibromofluoromethane (Surr)	250 ug/mL		
							Fluorobenzene (IS)	250 ug/mL		
							TBA-d9 (IS)	5000 ug/mL		
							Toluene-d8 (Surr)	250 ug/mL		
<b>BFBGRO ARCHON 00034</b>	06/08/20	07/20/19	fisher MeOH, Lot 198123	25 mL	BFBsurr_00033	1.25 mL	4-Bromofluorobenzene (Surr)	500 ug/mL		
.BFBsurr_00033	08/31/24		Restek, Lot A0149194		(Purchased Reagent)		4-Bromofluorobenzene (Surr)	10000 ug/mL		
<b>BFBGRO ARCHON 00038</b>	06/08/20	09/30/19	fisher MeOH, Lot 198123	25 mL	BFBsurr_00034	1.25 mL	4-Bromofluorobenzene (Surr)	500 ug/mL		
.BFBsurr_00034	08/31/24		Restek, Lot A0149194		(Purchased Reagent)		4-Bromofluorobenzene (Surr)	10000 ug/mL		
<b>GRO BTEXBlend_00010</b>	04/01/20	04/02/19	methanol, Lot 196628	5 mL	BTEX in Gas_00006	2 mL	Gasoline Range Organics (GRO) -C6-C10	2000 ug/mL		
.BTEX in Gas_00006	03/02/26		AccuStandard, Lot 216021275		(Purchased Reagent)		Gasoline Range Organics (GRO) -C6-C10	5000 ug/mL		

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
GRO_LCS_00054	06/08/20	07/26/19	MeOH, Lot 198123	25 mL	GROLCSstk_00025	1 mL	Gasoline Range Organics (GRO) -C6-C10	2000 ug/mL
.GROLCSstk_00025	07/18/27	AccuStandard, Lot 217071177			(Purchased Reagent)		Gasoline Range Organics (GRO) -C6-C10	50000 ug/mL
GRO_LCS_00057	06/08/20	10/11/19	MeOH, Lot 198123	50 mL	GROLCSstk_00026	2 mL	Gasoline Range Organics (GRO) -C6-C10	2000 ug/mL
.GROLCSstk_00026	07/18/27	AccuStandard, Lot 217071177			(Purchased Reagent)		Gasoline Range Organics (GRO) -C6-C10	50000 ug/mL
TFT Spike 00036	03/12/20	04/01/19	MeOH, Lot 177891	100 mL	V-TFTstk 00037	4 mL	Trifluorotoluene (Surr)	399.84 mg/L
.V-TFTstk 00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat 00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
..TFTneat 00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
TFT Spike 00038	03/12/20	10/10/19	MeOH, Lot 198123	100 mL	V-TFTstk 00037	4 mL	Trifluorotoluene (Surr)	399.84 mg/L
.V-TFTstk 00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat 00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
..TFTneat 00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
V2.4TFT-EX 00037	03/12/20	07/08/19	MeOH, Lot 198123	1 L	V-TFTstk 00037	240 uL	Trifluorotoluene (Surr)	2.39904 mg/L
.V-TFTstk 00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat 00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
..TFTneat 00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
V2.4TFT-EX 00042	03/12/20	10/09/19	MeOH, Lot 196628	1 L	V-TFTstk 00037	240 uL	Trifluorotoluene (Surr)	2.39904 mg/L
.V-TFTstk 00037	03/12/20	03/12/19	methanol, Lot 196628	50 mL	TFTneat 00014	420 uL	Trifluorotoluene (Surr)	9996 mg/L
..TFTneat 00014	03/31/21	Sigma-Aldrich, Lot STBG2214V			(Purchased Reagent)		Trifluorotoluene (Surr)	1190000 mg/L
VOAMasterMix_00043	10/31/19	09/13/19	MeOH, Lot 198123	50 mL	8260 L2/S7_00015	1000 uL	Ethyl acetate	100 ug/mL
							Ethyl acrylate	50 ug/mL
							Methyl methacrylate	100 ug/mL
							n-Butyl acetate	50 ug/mL
							2-Chloroethyl vinyl ether	50 ug/mL
							Acrolein	300 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Nitropropane	100 ug/mL
					Benzyl chloride	50 ug/mL		
					Isopropyl alcohol	500 ug/mL		
					Methacrylonitrile	500 ug/mL		
					n-Butanol	1250 ug/mL		
					VOARGAS__00021	1000 uL	Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
							2-Butanone (MEK)	250 ug/mL
2-Hexanone	250 ug/mL							
VOARKETON__00023	1000 uL	4-Methyl-2-pentanone (MIBK)	250 ug/mL					
		Acetone	250 ug/mL					

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					VOARMegMix_00032	1000 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							2-Methyl-2-propanol	500 ug/mL
							3-Chloro-1-propene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Acrylonitrile	500 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon disulfide	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Cyclohexane	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethyl ether	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Hexane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Iodomethane	50 ug/mL
							Isobutyl alcohol	1250 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							Methyl acetate	100 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							n-Heptane	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Tetrahydrofuran	100 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							trans-1,4-Dichloro-2-butene	50 ug/mL
							Trichloroethene	50 ug/mL
					VOARPOLARAD__00017	1250 uL	Acetonitrile	625 ug/mL
							Isopropyl ether	62.5 ug/mL
							Propionitrile	625 ug/mL
							Tert-amyl methyl ether	62.5 ug/mL
							Tert-butyl ethyl ether	62.5 ug/mL
					VOARVA 00045	1250 uL	Vinyl acetate	125 ug/mL
.8260 L2/S7_00015	05/31/20		Restek, Lot A0143198			(Purchased Reagent)	Ethyl acetate	5000 ug/mL
							Ethyl acrylate	2500 ug/mL
							Methyl methacrylate	5000 ug/mL
							n-Butyl acetate	2500 ug/mL
.VOAR2CEVE_00019	10/31/21		Restek, Lot A0142584			(Purchased Reagent)	2-Chloroethyl vinyl ether	2500 ug/mL
.VOARAcrolein_00055	10/31/19		Restek, Lot A0147676			(Purchased Reagent)	Acrolein	20000 ug/mL
.VOARADDCOM__00023	07/31/20		Restek, Lot A0145375			(Purchased Reagent)	1,2,3-Trimethylbenzene	2500 ug/mL
							1,3,5-Trichlorobenzene	2500 ug/mL
							2-Chloro-1,3-butadiene	2500 ug/mL
							2-Nitropropane	5000 ug/mL
							Benzyl chloride	2500 ug/mL
							Isopropyl alcohol	25000 ug/mL
							Methacrylonitrile	25000 ug/mL
							n-Butanol	62500 ug/mL
.VOARGAS__00021	11/30/21		Restek, Lot A0143158			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VOARKETON__00023	12/31/21		Restek, Lot A0143988		(Purchased Reagent)		Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
							2-Butanone (MEK)	12500 ug/mL
.VOARMegMix__00032	06/30/21		Restek, Lot A0143774		(Purchased Reagent)		2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
							1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
1,3-Dichloropropane	2500 ug/mL							
1,4-Dichlorobenzene	2500 ug/mL							
2,2-Dichloropropane	2500 ug/mL							
2-Chlorotoluene	2500 ug/mL							
2-Methyl-2-propanol	25000 ug/mL							
3-Chloro-1-propene	2500 ug/mL							
4-Chlorotoluene	2500 ug/mL							
4-Isopropyltoluene	2500 ug/mL							
Acrylonitrile	25000 ug/mL							
Benzene	2500 ug/mL							
Bromobenzene	2500 ug/mL							
Bromoform	2500 ug/mL							
Carbon disulfide	2500 ug/mL							
Carbon tetrachloride	2500 ug/mL							
Chlorobenzene	2500 ug/mL							
Chlorobromomethane	2500 ug/mL							
Chlorodibromomethane	2500 ug/mL							
Chloroform	2500 ug/mL							
cis-1,2-Dichloroethene	2500 ug/mL							
cis-1,3-Dichloropropene	2500 ug/mL							
Cyclohexane	2500 ug/mL							
Dibromomethane	2500 ug/mL							



REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorobromomethane	2500 ug/mL
							Ethyl ether	2500 ug/mL
							Ethyl methacrylate	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Ethylene Dibromide	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
.VOARPOLARAD__00017	01/31/21		Restek, Lot A0144915			(Purchased Reagent)	Acetonitrile	25000 ug/mL
							Isopropyl ether	2500 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.VOARVA__00045	01/31/20		Restek, Lot A0150515			(Purchased Reagent)	Vinyl acetate	5000 ug/mL
<b>VOAMasterSEC_00035</b>	09/30/19	08/15/19	MeOH, Lot 198123	25 mL	VOASMegMix2__00022	500 uL	Benzene	50 ug/mL
							Ethylbenzene	50 ug/mL
							m-Xylene & p-Xylene	50 ug/mL
							o-Xylene	50 ug/mL
							Toluene	50 ug/mL
.VOASMegMix2__00022	06/30/21		Restek, Lot A0144202			(Purchased Reagent)	Benzene	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							o-Xylene	2500 ug/mL
							Toluene	2500 ug/mL

# Method 8260C

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Volatile Organic Compounds (GC/MS)  
by Method 8260C

FORM II  
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

GC Column (1): DB-VRX ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TFT #	TOL #	BFB #
EQB-1-W-191009	580-89872-1	97	104	102	105	99
MW-6-W-191009	580-89872-2	97	103	101	102	97
MW-5-W-191009	580-89872-3	97	99	100	104	103
MW-4-W-191009	580-89872-4	94	101	100	104	100
MW-11-W-191009	580-89872-5	94	101	100	107	104
MW-10-W-191009	580-89872-6	97	101	102	102	97
BD-1-W-191009	580-89872-7	95	98	99	102	100
Trip Blank	580-89872-8	96	99	99	101	96
	MB 580-314028/6	98	103	102	101	100
	LCS 580-314028/3	98	101	99	101	99
	LCSD 580-314028/4	98	101	99	105	104

DBFM = Dibromofluoromethane (Surr)  
DCA = 1,2-Dichloroethane-d4 (Surr)  
TFT = Trifluorotoluene (Surr)  
TOL = Toluene-d8 (Surr)  
BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS  
80-120  
80-126  
80-120  
80-120  
80-120

# Column to be used to flag recovery values

FORM II 8260C

FORM III  
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 101119\_0004.D

Lab ID: LCS 580-314028/3 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Benzene	10.0	9.73	97	75-121	
Toluene	10.0	9.51	95	80-120	
Ethylbenzene	10.0	9.50	95	80-120	
m-Xylene & p-Xylene	10.0	9.67	97	80-120	
o-Xylene	10.0	9.71	97	80-120	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 101119\_0005.D

Lab ID: LCSD 580-314028/4 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Benzene	10.0	10.3	103	6	14	75-121	
Toluene	10.0	10.3	103	8	19	80-120	
Ethylbenzene	10.0	10.4	104	9	14	80-120	
m-Xylene & p-Xylene	10.0	10.4	104	8	14	80-120	
o-Xylene	10.0	10.8	108	11	16	80-120	

# Column to be used to flag recovery and RPD values

FORM IV  
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 101119\_0007.D Lab Sample ID: MB 580-314028/6  
 Matrix: Water Heated Purge: (Y/N) N  
 Instrument ID: SEA102 Date Analyzed: 10/11/2019 12:50  
 GC Column: DB-VRX ID: 0.25 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-314028/3	101119_0004 .D	10/11/2019 11:36
	LCSD 580-314028/4	101119_0005 .D	10/11/2019 12:01
Trip Blank	580-89872-8	101119_0008 .D	10/11/2019 13:41
EQB-1-W-191009	580-89872-1	101119_0009 .D	10/11/2019 14:06
MW-6-W-191009	580-89872-2	101119_0010 .D	10/11/2019 14:30
MW-5-W-191009	580-89872-3	101119_0011 .D	10/11/2019 14:55
MW-4-W-191009	580-89872-4	101119_0012 .D	10/11/2019 15:20
MW-11-W-191009	580-89872-5	101119_0013 .D	10/11/2019 15:45
MW-10-W-191009	580-89872-6	101119_0014 .D	10/11/2019 16:10
BD-1-W-191009	580-89872-7	101119_0015 .D	10/11/2019 16:34

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 091819\_0006.D BFB Injection Date: 09/18/2019  
 Instrument ID: SEA102 BFB Injection Time: 11:07  
 Analysis Batch No.: 311491

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.5	
75	30.0 - 60.0 % of mass 95	49.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.8	(0.9) 1
174	50.0 - 120.00 % of mass 95	89.7	
175	5.0 - 9.0 % of mass 174	6.4	(7.1) 1
176	95.0 - 101.0 % of mass 174	86.0	(96.0) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.8) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 580-311491/2	091819_0007. D	09/18/2019	11:32
	IC 580-311491/3	091819_0008. D	09/18/2019	11:57
	IC 580-311491/4	091819_0009. D	09/18/2019	12:21
	IC 580-311491/5	091819_0010. D	09/18/2019	12:47
	IC 580-311491/6	091819_0011. D	09/18/2019	13:11
	ICIS 580-311491/7	091819_0012. D	09/18/2019	13:36
	IC 580-311491/8	091819_0013. D	09/18/2019	14:01
	IC 580-311491/9	091819_0014. D	09/18/2019	14:26
	IC 580-311491/11	091819_0016. D	09/18/2019	16:24
	IC 580-311491/10	091819_0018. D	09/18/2019	17:14
	ICV 580-311491/13	091819_0020. D	09/18/2019	18:03

FORM V  
GC/MS VOA INSTRUMENT PERFORMANCE CHECK  
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: 101119\_0002.D BFB Injection Date: 10/11/2019  
 Instrument ID: SEA102 BFB Injection Time: 10:46  
 Analysis Batch No.: 314028

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.4	
75	30.0 - 60.0 % of mass 95	48.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.6	(0.6) 1
174	50.0 - 120.00 % of mass 95	98.7	
175	5.0 - 9.0 % of mass 174	7.0	(7.1) 1
176	95.0 - 101.0 % of mass 174	96.1	(97.3) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.3) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 580-314028/2	101119_0003. D	10/11/2019	11:11
	LCS 580-314028/3	101119_0004. D	10/11/2019	11:36
	LCSD 580-314028/4	101119_0005. D	10/11/2019	12:01
	CCVL 580-314028/5	101119_0006. D	10/11/2019	12:26
	MB 580-314028/6	101119_0007. D	10/11/2019	12:50
Trip Blank	580-89872-8	101119_0008. D	10/11/2019	13:41
EQB-1-W-191009	580-89872-1	101119_0009. D	10/11/2019	14:06
MW-6-W-191009	580-89872-2	101119_0010. D	10/11/2019	14:30
MW-5-W-191009	580-89872-3	101119_0011. D	10/11/2019	14:55
MW-4-W-191009	580-89872-4	101119_0012. D	10/11/2019	15:20
MW-11-W-191009	580-89872-5	101119_0013. D	10/11/2019	15:45
MW-10-W-191009	580-89872-6	101119_0014. D	10/11/2019	16:10
BD-1-W-191009	580-89872-7	101119_0015. D	10/11/2019	16:34



FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 580-311491/7 Date Analyzed: 09/18/2019 13:36  
 Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm)  
 Lab File ID (Standard): 091819\_0012.D Heated Purge: (Y/N) N  
 Calibration ID: 28240

	TBA <sub>d</sub> 9		FB		CBN <sub>Zd</sub> 5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	153910	6.51	265602	9.41	109147	12.37
UPPER LIMIT		6.67		9.58		12.54
LOWER LIMIT		6.34		9.25		12.20
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 580-311491/13	127483	6.49	285908	9.41	118218	12.37

TBA<sub>d</sub>9 = TBA-d9 (IS)

FB = Fluorobenzene (IS)

CBN<sub>Zd</sub>5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.1666 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 580-311491/7 Date Analyzed: 09/18/2019 13:36  
 Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm)  
 Lab File ID (Standard): 091819\_0012.D Heated Purge: (Y/N) N  
 Calibration ID: 28240

	DCBd4		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	126808	14.66				
UPPER LIMIT		14.83				
LOWER LIMIT		14.50				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 580-311491/13		139426	14.67			

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.1666 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII  
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 580-314028/2 Date Analyzed: 10/11/2019 11:11  
 Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm)  
 Lab File ID (Standard): 101119\_0003.D Heated Purge: (Y/N) N  
 Calibration ID: 28240

	FB		CBNZd5		DCBd4		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	255673	9.41	103528	12.37	119598	14.66	
UPPER LIMIT		9.58		12.53		14.83	
LOWER LIMIT		9.24		12.20		14.49	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-314028/3	253262	9.41	105560	12.37	125551	14.66	
LCSD 580-314028/4	257541	9.41	103184	12.36	124242	14.66	
CCVL 580-314028/5	248550	9.41	97714	12.36	71976	14.66	
MB 580-314028/6	246606	9.41	102477	12.37	111370	14.66	
580-89872-8	Trip Blank	239144	9.41	91709	12.37	106270	14.66
580-89872-1	EQB-1-W-191009	241982	9.41	98539	12.37	116792	14.66
580-89872-2	MW-6-W-191009	240340	9.41	98771	12.36	118442	14.66
580-89872-3	MW-5-W-191009	241769	9.41	95548	12.36	116121	14.66
580-89872-4	MW-4-W-191009	242733	9.41	96905	12.37	113266	14.66
580-89872-5	MW-11-W-191009	247974	9.41	95262	12.36	113561	14.66
580-89872-6	MW-10-W-191009	240141	9.41	99566	12.36	115522	14.66
580-89872-7	BD-1-W-191009	249649	9.41	101492	12.36	116923	14.66

FB = Fluorobenzene (IS)  
 CBNZd5 = Chlorobenzene-d5  
 DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.1666 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: EQB-1-W-191009 Lab Sample ID: 580-89872-1  
 Matrix: Water Lab File ID: 101119\_0009.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 09:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 14:06  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	0.54	J	2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	105		80-120
98-08-8	Trifluorotoluene (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-6-W-191009 Lab Sample ID: 580-89872-2  
 Matrix: Water Lab File ID: 101119\_0010.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 09:30  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 14:30  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-5-W-191009 Lab Sample ID: 580-89872-3  
 Matrix: Water Lab File ID: 101119\_0011.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 10:45  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 14:55  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	0.57	J	3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-4-W-191009 Lab Sample ID: 580-89872-4  
 Matrix: Water Lab File ID: 101119\_0012.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 11:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 15:20  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	7.2		3.0	0.53
108-88-3	Toluene	0.52	J	2.0	0.39
100-41-4	Ethylbenzene	30		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	110		3.0	0.75
95-47-6	o-Xylene	15		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	104		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-11-W-191009 Lab Sample ID: 580-89872-5  
 Matrix: Water Lab File ID: 101119\_0013.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 11:40  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 15:45  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	107		80-120
98-08-8	Trifluorotoluene (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-126



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-10-W-191009 Lab Sample ID: 580-89872-6  
 Matrix: Water Lab File ID: 101119\_0014.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 12:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 16:10  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: BD-1-W-191009 Lab Sample ID: 580-89872-7  
 Matrix: Water Lab File ID: 101119\_0015.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 00:01  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 16:34  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	102		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	95		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: Trip Blank Lab Sample ID: 580-89872-8  
 Matrix: Water Lab File ID: 101119\_0008.D  
 Analysis Method: 8260C Date Collected: 10/09/2019 00:01  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 13:41  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		80-126

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-311491/2	091819_0007.D
Level 2	IC 580-311491/3	091819_0008.D
Level 3	IC 580-311491/4	091819_0009.D
Level 4	IC 580-311491/5	091819_0010.D
Level 5	IC 580-311491/6	091819_0011.D
Level 6	ICIS 580-311491/7	091819_0012.D
Level 7	IC 580-311491/8	091819_0013.D
Level 8	IC 580-311491/9	091819_0014.D
Level 9	IC 580-311491/10	091819_0018.D
Level 10	IC 580-311491/11	091819_0016.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Dichlorodifluoromethane	++++ 0.6480	0.5161 0.7330	0.5050 0.7654	0.7207 0.7839	0.6421 0.7530	Qua2	-0.196	0.6822	0.0007275		0.1000	7.9		0.9940		0.9900	
Chloromethane	0.3360 0.2949	0.3580 0.3028	0.3195 0.3304	0.3374 0.3031	0.3117 0.2953	Ave		0.3189			0.1000	6.6	20.0				
Vinyl chloride	++++ 0.8086	0.8683 0.8630	0.7305 0.8742	0.9292 0.8529	0.8181 0.8583	Ave		0.8448			0.1000	6.5	20.0				
Butadiene	++++ 0.2753	0.2730 0.3148	0.2557 0.3180	0.3072 0.3319	0.2794 0.3133	Ave		0.2965				8.8	20.0				
Bromomethane	0.7752 0.6489	0.8351 0.6459	0.7586 0.6968	0.7264 0.6654	0.6901 0.6499	Lin2	0.0737	0.6805			0.1000	6.6		0.9950		0.9900	
Chloroethane	0.2962 0.1818	0.2074 0.1925	0.1974 0.2063	0.2137 0.2030	0.1846 0.1985	Lin2	0.0442	0.1909			0.0600	8.6		0.9920		0.9900	
Dichlorofluoromethane	++++ 0.4672	0.5626 0.5022	0.5055 0.5372	0.5596 0.5299	0.4861 0.5185	Ave		0.5188				6.2	20.0				
Acrolein	++++ 0.0438	0.0729 0.0449	0.0504 0.0499	0.0508 0.0488	0.0463 0.0447	Lin2	0.1455	0.0452				8.4		0.9920		0.9900	
Acetonitrile	++++ 0.0302	0.0349 0.0293	0.0351 0.0332	0.0343 0.0310	0.0325 0.0283	Lin2	0.0642	0.0310				6.3		0.9960		0.9900	
Trichlorofluoromethane	++++ 1.0123	++++ 1.1683	0.8291 1.2541	1.1136 1.3004	1.0296 1.2648	Lin2	-0.777	1.2090			0.1000	8.0		0.9930		0.9900	
Isopropyl alcohol	++++ 0.0150	++++ 0.0136	0.0196 0.0168	0.0192 0.0157	0.0170 ++++	Lin2	0.0955	0.0155				9.3		0.9900		0.9900	
Acetone	++++ 0.0679	0.1726 0.0644	0.1099 0.0715	0.0972 0.0724	0.0760 0.0607	Lin2	0.5212	0.0661			0.0200	9.7		0.9900		0.9900	
Ethyl ether	0.2480 0.1858	0.2119 0.1887	0.2066 0.1623	0.2111 0.1951	0.1930 0.1889	Lin1	0.0360	0.1851				6.6		0.9960		0.9900	

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102

GC Column: DB-VRX

ID: 0.25 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32

Calibration End Date: 09/18/2019 17:14

Calibration ID: 28240

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,1-Dichloroethene	++++ 0.5051	0.4904 0.5601	0.4131 0.4821	0.5652 0.5174	0.5123 0.6020	Ave		0.5164		0.1000	10.7		20.0				
t-Butyl alcohol	++++ 0.0249	++++ 0.0228	0.0235 0.0218	0.0268 0.0217	0.0253 0.0239	Qua1	0.1444	0.0217	0.0000010		13.9			0.9970		0.9900	
Acrylonitrile	++++ 0.0684	0.0642 0.0667	0.0602 0.0604	0.0740 0.0603	0.0631 0.0670	Lin2	-0.015	0.0652			7.5			0.9940		0.9900	
Iodomethane	++++ 0.4768	0.4404 0.5108	0.4342 0.4745	0.5184 0.4996	0.4393 0.5522	Ave		0.4829			8.4		20.0				
Methylene Chloride	++++ 0.3073	0.3952 0.2638	0.3262 0.2659	0.3410 0.2705	0.2748 0.2681	Lin2	0.1219	0.2757		0.1000	7.6			0.9940		0.9900	
Methyl acetate	++++ 0.1610	0.1582 0.1274	0.1382 0.1452	0.1582 0.1435	0.1377 0.1401	Ave		0.1455		0.1000	7.8		20.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	++++ 0.4056	0.2889 0.4036	0.2818 0.4037	0.3881 0.4355	0.3634 0.4126	Lin2	-0.144	0.4062		0.1000	6.8			0.9950		0.9900	
3-Chloro-1-propene	0.3719 0.3444	0.3168 0.3048	0.2967 0.2962	0.3036 0.3135	0.2949 0.3164	Ave		0.3159			7.8		20.0				
Carbon disulfide	++++ 0.7125	0.6610 0.6735	0.5743 0.6847	0.6758 0.7314	0.6151 0.7144	Lin2	-0.067	0.6856		0.1000	7.0			0.9950		0.9900	
trans-1,2-Dichloroethene	0.2676 0.2207	0.2792 0.2365	0.2269 0.2338	0.2320 0.2492	0.2194 0.2490	Ave		0.2414		0.1000	8.2		20.0				
Methyl tert-butyl ether	++++ 0.5980	0.7144 0.5788	0.6258 0.6268	0.6318 0.6235	0.6338 0.5889	Ave		0.6246		0.1000	6.3		20.0				
Propionitrile	++++ 0.0267	0.0385 0.0253	0.0273 0.0278	0.0300 0.0278	0.0287 0.0258	Lin2	0.1279	0.0265			7.9			0.9930		0.9900	
1,1-Dichloroethane	1.0024 0.8826	0.9589 0.8997	0.8943 0.8915	0.9473 0.9009	0.9049 0.9366	Ave		0.9219		0.2000	4.1		20.0				
Vinyl acetate	++++ 0.0478	0.0496 0.0496	0.0445 0.0524	0.0504 0.0529	0.0485 0.0522	Ave		0.0498			5.3		20.0				
2-Chloro-1,3-butadiene	++++ 0.5623	0.4885 0.6087	0.5187 0.5989	0.5789 0.6112	0.5365 0.6115	Ave		0.5683			7.9		20.0				
Hexane	++++ 0.2778	++++ 0.3119	0.2338 0.3227	0.2833 0.3616	0.2704 0.3382	Lin2	-0.194	0.3217			8.4			0.9920		0.9900	
2-Butanone	++++ 0.0609	0.0862 0.0564	0.0615 0.0635	0.0700 0.0643	0.0616 0.0616	Ave		0.0651		0.0200	13.3		20.0				
Diisopropyl ether	++++ 0.6450	0.7142 0.6643	0.6748 0.6716	0.6523 0.6843	0.6601 0.6853	Ave		0.6724			3.1		20.0				
Methacrylonitrile	++++ 0.0294	0.0351 0.0300	0.0276 0.0316	0.0319 0.0336	0.0305 0.0314	Qua2	0.0422	0.0293	0.0000023		7.0			0.9950		0.9900	
cis-1,2-Dichloroethene	++++ 0.6318	0.7534 0.6452	0.6574 0.6357	0.7197 0.6354	0.6460 0.6514	Ave		0.6640		0.1000	6.4		20.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Ethyl acetate	++++ 0.1703	0.2101 0.1634	0.1716 0.1844	0.1907 0.1829	0.1782 0.1710	Lin2	0.0588	0.1741			6.1			0.9960		0.9900	
Bromochloromethane	0.1667 0.1460	0.1674 0.1523	0.1516 0.1547	0.1513 0.1575	0.1495 0.1564	Ave		0.1553			4.5		20.0				
Chloroform	++++ 1.0142	1.1388 1.0348	1.0613 1.0257	1.0704 1.0380	1.0477 1.0712	Ave		1.0558		0.2000	3.5		20.0				
Ethyl t-butyl ether	++++ 0.6354	0.7009 0.6384	0.6580 0.6605	0.6380 0.6696	0.6371 0.6515	Ave		0.6544			3.3		20.0				
Isobutanol	++++ 0.0136	++++ 0.0130	0.0136 0.0144	0.0158 0.0146	0.0149 0.0137	Ave		0.0142			6.5		20.0				
2,2-Dichloropropane	++++ 0.2663	0.2764 0.2826	0.2526 0.2783	0.2710 0.3099	0.2658 0.2807	Ave		0.2760			5.7		20.0				
Tetrahydrofuran	++++ 0.0529	0.0860 0.0509	0.0579 0.0560	0.0618 0.0560	0.0548 0.0523	Lin2	0.0587	0.0525			8.5			0.9920		0.9900	
1,2-Dichloroethane	0.4510 0.2883	0.3563 0.2883	0.3126 0.3009	0.3073 0.3031	0.2955 0.3003	Lin2	0.0755	0.2909		0.1000	3.4			0.9990		0.9900	
1,1,1-Trichloroethane	++++ 0.3362	0.3131 0.3762	0.2923 0.3810	0.3477 0.4130	0.3304 0.4132	Lin2	-0.087	0.3742		0.1000	8.9			0.9910		0.9900	
n-Butyl alcohol	++++ 0.0057	++++ 0.0055	0.0068 0.0065	0.0070 0.0065	0.0063 0.0059	Lin2	0.0457	0.0061			7.6			0.9940		0.9900	
1,1-Dichloropropene	++++ 0.2666	0.2267 0.3051	0.2211 0.3046	0.2704 0.3335	0.2644 0.3339	Lin2	-0.096	0.3009			9.3			0.9900		0.9900	
Cyclohexane	++++ 0.7159	++++ 0.8236	0.5236 0.8108	0.7258 0.8876	0.7218 0.9177	Lin2	-0.654	0.8394		0.1000	7.2			0.9940		0.9900	
Carbon tetrachloride	++++ 0.2678	++++ 0.3099	0.2125 0.3226	0.2680 0.3739	0.2605 0.3667	Qua2	-0.118	0.2733	0.0007325	0.1000	4.8			0.9970		0.9900	
Benzene	++++ 2.0856	2.2816 2.1567	2.1393 2.1561	2.1808 2.1852	2.1417 2.2811	Ave		2.1787		0.5000	3.0		20.0				
Tert-amyl methyl ether	++++ 0.6528	0.7601 0.6583	0.6587 0.6732	0.6526 0.6804	0.6617 0.6827	Lin2	0.0951	0.6596			3.5			0.9990		0.9900	
Ethyl acrylate	++++ 0.2556	0.3315 0.2706	0.2605 0.3053	0.2711 0.3117	0.2512 0.2903	Ave		0.2831			9.9		20.0				
n-Heptane	++++ 0.2496	0.2262 0.2906	0.2110 0.2957	0.2549 0.3213	0.2504 0.3004	Ave		0.2667			13.9		20.0				
Dibromomethane	++++ 0.1562	0.1822 0.1593	0.1582 0.1671	0.1649 0.1700	0.1596 0.1689	Lin2	0.0138	0.1622			4.4			0.9980		0.9900	
1,2-Dichloropropane	++++ 0.5111	0.5794 0.5311	0.5313 0.5395	0.5473 0.5301	0.5179 0.5554	Ave		0.5381		0.1000	3.8		20.0				
2-Nitropropane	++++ 0.0524	++++ 0.0547	0.0534 0.0638	0.0492 0.0703	0.0513 0.0695	Qua2	0.0128	0.0491	0.0000804		4.5			0.9970		0.9900	

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Trichloroethene	++++ 0.6325	0.6174 0.6755	0.6021 0.6872	0.6576 0.7260	0.6417 0.7475	Ave		0.6653			0.2000	7.3	20.0				
Bromodichloromethane	++++ 0.7514	0.9132 0.7845	0.7469 0.7878	0.7759 0.7987	0.7664 0.8268	Lin2	0.0953	0.7745			0.2000	5.4		0.9970		0.9900	
Methyl methacrylate	++++ 0.1568	0.1891 0.1646	0.1426 0.1814	0.1649 0.1829	0.1628 0.1756	Ave		0.1690				8.7	20.0				
2-Chloroethyl vinyl ether	++++ 0.1853	0.2623 0.1937	0.2041 0.2072	0.2100 0.2050	0.1951 0.2027	Lin2	0.0569	0.1953				6.0		0.9960		0.9900	
Methylcyclohexane	++++ 0.8725	0.7459 0.9767	0.6946 0.9625	0.8710 1.0600	0.8578 1.0590	Qua2	-0.158	0.8622	0.0015479		0.1000	5.6		0.9970		0.9900	
cis-1,3-Dichloropropene	++++ 0.7502	0.8793 0.7614	0.7849 0.7679	0.7849 0.7365	0.7592 0.7122	Lin2	0.1266	0.7435			0.2000	2.7		0.9990		0.9900	
4-Methyl-2-pentanone	++++ 0.4376	0.7439 0.4373	0.4701 0.4696	0.4802 0.4610	0.4718 0.4419	Qua2	1.4383	0.4152	0.0000630		0.0600	10.4		0.9900		0.9900	
trans-1,3-Dichloropropene	++++ 0.8208	1.0601 0.8445	0.8215 0.8856	0.8438 0.8948	0.8343 0.8877	Lin2	0.1566	0.8439			0.1000	6.7		0.9950		0.9900	
1,1,2-Trichloroethane	1.1422 0.5074	0.7534 0.5115	0.5577 0.5282	0.5529 0.5290	0.5314 0.5234	Lin2	0.3010	0.4963			0.1000	8.5		0.9920		0.9900	
Ethyl methacrylate	++++ 0.6039	0.8034 0.6366	0.5681 0.6957	0.6091 0.7027	0.6284 0.7001	Ave		0.6609				10.8	20.0				
Toluene	++++ 1.3914	1.5687 1.4879	1.3861 1.5140	1.4977 1.5594	1.4064 1.5954	Ave		1.4897			0.4000	5.3	20.0				
1,3-Dichloropropane	++++ 0.8466	1.1697 0.8284	0.8811 0.8793	0.9062 0.8645	0.8744 0.8545	Lin2	0.2803	0.8414				5.4		0.9970		0.9900	
2-Hexanone	++++ 0.1609	++++ 0.1573	0.1683 0.1756	0.1783 0.1765	0.1793 0.1640	Lin2	0.0271	0.1694			0.0600	5.4		0.9970		0.9900	
Dibromochloromethane	++++ 0.6494	++++ 0.6803	0.6289 0.7194	0.6418 0.7342	0.6391 0.7432	Ave		0.6795			0.1000	6.9	20.0				
n-Butyl acetate	++++ 0.6812	++++ 0.6867	0.7046 0.7499	0.7890 0.7443	0.7214 0.7090	Ave		0.7233				5.0	20.0				
1,2-Dibromoethane	++++ 0.5529	0.7319 0.5602	0.5548 0.5881	0.5836 0.5846	0.5664 0.5760	Ave		0.5887			0.1000	9.4	20.0				
Tetrachloroethene	++++ 0.2002	0.1767 0.2334	0.1670 0.2416	0.2114 0.2704	0.1940 0.2655	Qua2	-0.031	0.2000	0.0005307		0.2000	6.3		0.9960		0.9900	
1,1,1,2-Tetrachloroethane	++++ 0.6630	++++ 0.6954	0.6609 0.7071	0.6801 0.7317	0.6611 0.7527	Ave		0.6940				5.0	20.0				
Chlorobenzene	++++ 1.7311	2.3262 1.8052	1.7875 1.8351	1.8167 1.8737	1.7559 1.9146	Lin2	0.4225	1.7826			0.5000	6.6		0.9950		0.9900	
Ethylbenzene	++++ 0.8522	0.9630 0.9390	0.8105 0.9574	0.8657 0.9939	0.8562 1.0188	Lin2	-0.028	0.9233			0.1000	8.4		0.9920		0.9900	

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
m-Xylene & p-Xylene	++++ 2.0690	2.4825 2.2435	1.9796 2.2517	2.0926 2.3472	2.0657 2.4015	Lin2	0.1187	2.1897		0.1000	8.2			0.9920		0.9900	
Bromoform	++++ 0.4103	++++ 0.4487	0.3885 0.4890	0.3880 0.5277	0.4039 0.5360	Ave		0.4490		0.1000	13.6		20.0				
Styrene	++++ 1.6318	2.0788 1.7860	1.4933 1.8287	1.5423 1.8880	1.5925 1.9415	Qua2	0.4597	1.4923	0.0035806	0.3000	8.1			0.9950		0.9900	
o-Xylene	++++ 1.1049	1.3705 1.1816	1.0673 1.2024	1.1368 1.2529	1.1009 1.3003	Qua2	0.2645	1.0508	0.0018354	0.3000	5.3			0.9980		0.9900	
1,1,2,2-Tetrachloroethane	++++ 0.6257	++++ 0.5887	0.7088 0.6241	0.6781 0.6027	0.6616 0.5821	Lin2	0.2321	0.6079		0.3000	3.9			0.9980		0.9900	
trans-1,4-Dichloro-2-butene	++++ 0.1393	0.2589 0.1371	0.3885 0.1431	0.3880 0.1426	0.4039 0.1374	Lin1	0.0925	0.1386			9.9			0.9990		0.9900	
1,2,3-Trichloropropane	++++ 0.1911	++++ 0.1808	0.2124 0.1889	0.2042 0.1819	0.2107 0.1717	Ave		0.1927			7.8		20.0				
Isopropylbenzene	++++ 2.7262	2.9864 2.9953	2.3649 3.0110	2.6992 3.1794	2.6796 3.2623	Ave		2.8783		0.1000	9.8		20.0				
Bromobenzene	++++ 0.7238	1.1131 0.7295	0.7678 0.7477	0.7373 0.7479	0.7210 0.7407	Lin2	0.3391	0.7094			7.9			0.9930		0.9900	
N-Propylbenzene	++++ 0.6768	0.7932 0.7192	0.6078 0.7239	0.6471 0.7466	0.6515 0.7392	Lin2	0.0341	0.6934			8.9			0.9910		0.9900	
2-Chlorotoluene	++++ 0.6444	0.8527 0.6562	0.6579 0.6685	0.6378 0.6828	0.6440 0.6676	Lin2	0.1650	0.6443			6.1			0.9960		0.9900	
4-Chlorotoluene	++++ 1.7663	2.6334 1.7951	1.8088 1.8093	1.8018 1.7972	1.7563 1.7763	Lin2	0.7480	1.7248			8.0			0.9930		0.9900	
1,3,5-Trimethylbenzene	++++ 2.0956	2.6260 2.1759	1.9155 2.1774	2.0932 2.2026	2.0432 2.1898	Lin2	0.3325	2.0986			8.1			0.9930		0.9900	
t-Butylbenzene	++++ 1.8183	2.1418 1.8990	1.6205 1.9141	1.8121 1.9487	1.7255 1.9370	Lin2	0.1370	1.8396			8.2			0.9920		0.9900	
1,2,4-Trimethylbenzene	++++ 2.1542	2.9693 2.2135	2.0986 2.2254	2.1810 2.2406	2.1313 2.2254	Lin2	0.6339	2.1372			8.0			0.9930		0.9900	
sec-Butylbenzene	++++ 2.6325	3.0511 2.7595	2.3398 2.7459	2.6539 2.7952	2.5471 2.7503	Lin2	0.1678	2.6618			7.4			0.9940		0.9900	
Benzyl chloride	++++ 1.2418	++++ 1.2074	1.2990 1.3147	1.3015 1.4294	1.2847 1.1854	Lin2	0.0473	1.2777			6.4			0.9950		0.9900	
1,3-Dichlorobenzene	++++ 0.6952	++++ 0.7230	0.7045 0.7940	0.6883 0.8306	0.6766 0.8376	Ave		0.7437		0.6000	8.9		20.0				
4-Isopropyltoluene	++++ 2.4081	++++ 2.5714	2.1900 2.6156	2.4083 2.7214	2.3261 2.7349	Lin2	-0.920	2.6005			4.8			0.9970		0.9900	
1,4-Dichlorobenzene	++++ 1.4735	++++ 1.5104	1.5806 1.5870	1.5083 1.6153	1.4377 1.6124	Ave		1.5407		0.5000	4.4		20.0				

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.



FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
1,2,3-Trimethylbenzene	++++ 2.2859	3.4169 2.3010	2.3273 2.3304	2.4368 2.2993	2.2758 2.2769	Lin2	0.9878	2.2304			7.9			0.9930		0.9900	
1,2-Dichlorobenzene	++++ 1.4131	++++ 1.4058	1.5063 1.4609	1.5032 1.4445	1.4248 1.4146	Lin2	0.1802	1.4264		0.4000	2.0			1.0000		0.9900	
n-Butylbenzene	++++ 2.0634	2.5474 2.1362	1.8858 2.1358	2.1490 2.1926	2.0061 2.1393	Lin2	0.2951	2.0772			7.7			0.9930		0.9900	
1,2-Dibromo-3-Chloropropane	++++ 0.1335	++++ 0.1302	0.1434 0.1511	0.1474 0.1478	0.1420 0.1352	Lin2	0.0092	0.1403		0.0500	5.7			0.9960		0.9900	
1,3,5-Trichlorobenzene	++++ 1.0344	1.6517 1.0411	1.1222 1.0999	1.0776 1.1240	1.0180 1.0919	Lin2	0.5206	1.0302			9.1			0.9910		0.9900	
1,2,4-Trichlorobenzene	++++ 1.0209	++++ 1.0657	1.1539 1.1716	1.1140 1.2337	1.0615 1.2382	Ave		1.1325		0.2000	7.1	20.0					
Naphthalene	++++ 1.7000	++++ 1.6318	1.9451 1.8720	1.9372 1.8247	1.8465 1.6951	Lin2	0.4499	1.7559			5.5			0.9970		0.9900	
Hexachlorobutadiene	++++ 0.1915	++++ 0.1988	0.1767 0.2107	0.1979 0.2154	0.1884 0.2075	Lin2	-0.059	0.2050			4.2			0.9980		0.9900	
1,2,3-Trichlorobenzene	++++ 0.7480	++++ 0.7326	0.8644 0.8137	0.8374 0.8146	0.7768 0.7697	Lin2	0.1900	0.7733			4.5			0.9980		0.9900	
Dibromofluoromethane (Surr)	0.2779 0.2821	0.2761 0.2820	0.2853 0.2751	0.2776 0.2820	0.2804 0.2794	Ave		0.2798			1.1	20.0					
1,2-Dichloroethane-d4 (Surr)	0.2932 0.2733	0.2835 0.2727	0.2794 0.2728	0.2833 0.2753	0.2784 0.2781	Ave		0.2790			2.3	20.0					
Trifluorotoluene (Surr)	0.5282 0.5258	0.5150 0.5382	0.5227 0.5452	0.5220 0.5631	0.5227 0.5522	Ave		0.5335			2.9	20.0					
Toluene-d8 (Surr)	2.3192 2.2880	2.2989 2.2809	2.3001 2.2626	2.3312 2.2340	2.3074 2.2796	Ave		2.2902			1.2	20.0					
4-Bromofluorobenzene (Surr)	0.9202 0.9184	0.9182 0.9263	0.9125 0.9037	0.9147 0.9118	0.9456	Ave		0.9202		0.9309	1.3	20.0					

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-311491/2	091819_0007.D
Level 2	IC 580-311491/3	091819_0008.D
Level 3	IC 580-311491/4	091819_0009.D
Level 4	IC 580-311491/5	091819_0010.D
Level 5	IC 580-311491/6	091819_0011.D
Level 6	ICIS 580-311491/7	091819_0012.D
Level 7	IC 580-311491/8	091819_0013.D
Level 8	IC 580-311491/9	091819_0014.D
Level 9	IC 580-311491/10	091819_0018.D
Level 10	IC 580-311491/11	091819_0016.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Dichlorodifluoromethane	CBNZ d5	Qua2	++++ 72545	2755 219146	5365 339086	18176 512317	33630 751500	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Chloromethane	FB	Ave	2169 80333	4738 215917	8384 344183	20958 455509	40406 694515	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Vinyl chloride	CBNZ d5	Ave	++++ 90518	4635 258017	7761 387292	23435 557396	42849 856627	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Butadiene	FB	Ave	++++ 75002	3613 224458	6710 331257	19083 498810	36227 736876	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Bromomethane	CBNZ d5	Lin2	2051 72646	4458 193089	8060 308697	18319 434856	36145 648567	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Chloroethane	FB	Lin2	1912 49532	2745 137251	5180 214899	13273 305110	23938 466789	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Dichlorofluoromethane	FB	Ave	++++ 127272	7445 358137	13263 559706	34758 796376	63026 1219561	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Acrolein	FB	Lin2	++++ 71641	5787 191933	7931 312037	18937 440097	36000 631435	++++ 120	6.00 300	12.0 450	30.0 600	60.0 900
Acetonitrile	FB	Lin2	++++ 102673	5770 261082	11523 432025	26626 581836	52735 832665	++++ 250	12.5 625	25.0 938	62.5 1250	125 1875
Trichlorofluoromethane	CBNZ d5	Lin2	++++ 113323	++++ 349279	8809 555606	28085 849850	53921 1262288	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Isopropyl alcohol	FB	Lin2	++++ 40985	++++ 97180	5133 174631	11900 235659	22060 ++++	++++ 200	++++ 500	20.0 750	50.0 1000	100 ++++
Acetone	FB	Lin2	++++ 92440	11421 229694	14414 372384	30197 543981	49285 713476	++++ 100	5.00 250	10.0 375	25.0 500	50.0 750
Ethyl ether	FB	Lin1	1601 50624	2804 134587	5420 169079	13110 293174	25016 444208	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,1-Dichloroethene	CBNZ d5	Ave	++++ 56544	2618 167462	4389 213590	14255 338161	26833 600763	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102

GC Column: DB-VRX

ID: 0.25 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32

Calibration End Date: 09/18/2019 17:14

Calibration ID: 28240

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
t-Butyl alcohol	FB	Qual	++++ 67823	++++ 162328	6163 227298	16660 326436	32745 561852	++++ 200	++++ 500	20.0 750	50.0 1000	100 1500
Acrylonitrile	FB	Lin2	++++ 186342	8490 475628	15806 629352	45976 906232	81820 1576627	++++ 200	10.0 500	20.0 750	50.0 1000	100 1500
Iodomethane	FB	Ave	++++ 129889	5828 364261	11392 494361	32196 750851	56960 1298779	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Methylene Chloride	FB	Lin2	++++ 83706	5230 188106	8559 277009	21179 406502	35623 630622	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Methyl acetate	FB	Ave	++++ 87737	4188 181762	7254 302633	19656 431432	35697 659173	++++ 40.0	2.00 100	4.00 150	10.0 200	20.0 300
1,1,2-Trichloro-1,2,2-trifluoroethane	DCBd 4	Lin2	++++ 52746	1767 145470	3376 218834	11393 363914	22540 547177	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
3-Chloro-1-propene	CBNZ d5	Ave	984 38550	1691 91123	3152 131220	7657 204914	15446 315788	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Carbon disulfide	FB	Lin2	++++ 194090	8748 480273	15069 713350	41973 1099329	79751 1680207	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
trans-1,2-Dichloroethene	FB	Ave	1727 60114	3695 168649	5953 243583	14408 374604	28450 585573	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Methyl tert-butyl ether	FB	Ave	++++ 162891	9455 412767	16420 652973	39244 937083	82175 1385045	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Propionitrile	FB	Lin2	++++ 90811	6367 225650	8960 362270	23326 522836	46470 757923	++++ 250	12.5 625	25.0 938	62.5 1250	125 1875
1,1-Dichloroethane	CBNZ d5	Ave	2652 98806	5119 268989	9501 394976	23891 588772	47394 934753	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Vinyl acetate	FB	Ave	++++ 32577	1641 88436	2920 136420	7830 198620	15714 307056	++++ 50.0	2.50 125	5.00 188	12.5 250	25.0 375
2-Chloro-1,3-butadiene	DCBd 4	Ave	++++ 73126	2988 219420	6215 324597	16993 510785	33273 810938	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Hexane	FB	Lin2	++++ 75676	++++ 222438	6134 336246	17593 543430	35050 795440	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
2-Butanone	CBNZ d5	Ave	++++ 34092	2302 84307	3268 140666	8827 210260	16144 307544	++++ 100	5.00 250	10.0 375	25.0 500	50.0 750
Diisopropyl ether	FB	Ave	++++ 219648	11814 592195	22132 874556	50644 1285647	106982 2014814	++++ 25.0	1.25 62.5	2.50 93.8	6.25 125	12.5 188
Methacrylonitrile	FB	Qua2	++++ 80055	4642 214144	7245 329002	19830 505153	39574 738067	++++ 200	10.0 500	20.0 750	50.0 1000	100 1500
cis-1,2-Dichloroethene	CBNZ d5	Ave	++++ 70729	4022 192900	6985 281663	18151 415240	33835 650119	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Ethyl acetate	FB	Lin2	++++ 92759	5560 232976	9005 384202	23695 549812	46214 804494	++++ 40.0	2.00 100	4.00 150	10.0 200	20.0 300
Bromochloromethane	FB	Ave	1076 39773	2215 108594	3979 161211	9396 236761	19378 367756	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102

GC Column: DB-VRX

ID: 0.25 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32

Calibration End Date: 09/18/2019 17:14

Calibration ID: 28240

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBNZ d5	Ave	++++ 113536	6079 309366	11276 454419	26996 678403	54872 1069064	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Ethyl t-butyl ether	FB	Ave	++++ 216347	11594 569068	21583 860152	49530 1258002	103255 1915508	++++ 25.0	1.25 62.5	2.50 93.8	6.25 125	12.5 188
Isobutanol	FB	Ave	++++ 92681	++++ 231674	8911 374511	24608 550438	48406 807025	++++ 500	++++ 1250	50.0 1875	125 2500	250 3750
2,2-Dichloropropane	FB	Ave	++++ 72546	3658 201513	6629 289915	16834 465694	34455 660261	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Tetrahydrofuran	FB	Lin2	++++ 28804	2275 72637	3041 116729	7675 168426	14215 245882	++++ 40.0	2.00 100	4.00 150	10.0 200	20.0 300
1,2-Dichloroethane	FB	Lin2	2911 78547	4715 205614	8203 313488	19085 455568	38315 706257	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,1,1-Trichloroethane	FB	Lin2	++++ 91576	4143 268307	7670 396974	21598 620784	42839 971922	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
n-Butyl alcohol	FB	Lin2	++++ 39118	++++ 97982	4450 168153	10882 244116	20450 344803	++++ 500	++++ 1250	50.0 1875	125 2500	250 3750
1,1-Dichloropropene	FB	Lin2	++++ 72632	3000 217577	5802 317339	16794 501259	34280 785293	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Cyclohexane	CBNZ d5	Lin2	++++ 80138	++++ 246215	5563 359206	18304 580118	37804 915865	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Carbon tetrachloride	FB	Qua2	++++ 72946	++++ 221020	5576 336072	16648 561923	33773 862474	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Benzene	CBNZ d5	Ave	++++ 233472	12180 644784	22729 955235	54999 1428131	112167 2276618	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Tert-amyl methyl ether	FB	Lin2	++++ 222289	12574 586774	21606 876681	50665 1278218	107237 2007261	++++ 25.0	1.25 62.5	2.50 93.8	6.25 125	12.5 188
Ethyl acrylate	FB	Ave	++++ 69622	4387 192951	6836 318019	16839 468455	32572 682817	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
n-Heptane	FB	Ave	++++ 67987	2993 207215	5537 308099	15829 482869	32461 706491	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Dibromomethane	FB	Lin2	++++ 42539	2411 113587	4152 174133	10241 255468	20692 397307	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,2-Dichloropropane	CBNZ d5	Ave	++++ 57219	3093 158780	5645 239011	13803 346433	27125 554298	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
2-Nitropropane	FB	Qua2	++++ 28554	++++ 78049	2802 133021	6109 211247	13302 326734	++++ 40.0	++++ 100	4.00 150	10.0 200	20.0 300
Trichloroethene	CBNZ d5	Ave	++++ 70809	3296 201955	6397 304455	16585 474489	33609 746065	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Bromodichloromethane	CBNZ d5	Lin2	++++ 84118	4875 234550	7935 349039	19568 521983	40137 825147	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Methyl methacrylate	FB	Ave	++++ 85411	5005 234721	7484 378043	20489 549651	42200 826015	++++ 40.0	2.00 100	4.00 150	10.0 200	20.0 300

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102

GC Column: DB-VRX

ID: 0.25 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32

Calibration End Date: 09/18/2019 17:14

Calibration ID: 28240

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chloroethyl vinyl ether	CBNZ d5	Lin2	++++ 20748	1400 57917	2168 91795	5295 133974	10217 202339	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Methylcyclohexane	CBNZ d5	Qua2	++++ 97678	3982 291993	7380 426409	21965 692778	44925 1056849	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
cis-1,3-Dichloropropene	DCBD 4	Lin2	++++ 97577	5379 274454	9355 416215	23040 615503	47087 944499	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
4-Methyl-2-pentanone	CBNZ d5	Qua2	++++ 244958	19855 653759	24974 1040166	60550 1506540	123545 2205225	++++ 100	5.00 250	10.0 375	25.0 500	50.0 750
trans-1,3-Dichloropropene	CBNZ d5	Lin2	++++ 91888	5659 252483	8728 392379	21280 584797	43696 885889	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,1,2-Trichloroethane	CBNZ d5	Lin2	++++ 56806	3022 152931	4022 234009	5925 345700	13943 522325	0.500 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Ethyl methacrylate	CBNZ d5	Ave	++++ 67600	4289 190319	6036 308234	15360 459245	32912 698738	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Toluene	CBNZ d5	Ave	++++ 155759	8374 444824	14727 670769	37772 1019121	73658 1592187	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,3-Dichloropropane	CBNZ d5	Lin2	++++ 94772	6244 247665	9361 389573	22853 565015	45797 852839	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
2-Hexanone	CBNZ d5	Lin2	++++ 90042	++++ 235095	++++ 388888	8938 576834	22485 818615	++++ 100	++++ 250	10.0 375	25.0 500	50.0 750
Dibromochloromethane	CBNZ d5	Ave	++++ 72692	++++ 203389	6682 318742	16185 479860	33474 741737	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
n-Butyl acetate	CBNZ d5	Ave	++++ 76262	++++ 205290	7486 332245	19899 486437	37781 707549	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,2-Dibromoethane	CBNZ d5	Ave	++++ 61897	3907 167478	5894 260549	14719 382075	29665 574839	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Tetrachloroethene	FB	Qua2	++++ 54531	2338 166463	4381 251660	13131 406454	25154 624495	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	++++ 74223	++++ 207913	7022 313294	17153 478191	34625 751194	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Chlorobenzene	CBNZ d5	Lin2	++++ 193785	12418 539704	18991 813039	45816 1224556	91963 1910769	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Ethylbenzene	CBNZ d5	Lin2	++++ 95397	5141 280728	8611 424172	21832 649542	44843 1016741	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
m-Xylene & p-Xylene	CBNZ d5	Lin2	++++ 231611	13252 670717	21032 997587	52775 1534035	108187 2396696	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Bromoform	CBNZ d5	Ave	++++ 45933	++++ 134133	4128 216668	9784 344889	21155 534921	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Styrene	CBNZ d5	Qua2	++++ 182668	11097 533952	15865 810173	38897 1233885	83403 1937657	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
o-Xylene	CBNZ d5	Qua2	++++ 123685	7316 353270	11339 532695	28670 818856	57659 1297693	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle

Job No.: 580-89872-1

Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102

GC Column: DB-VRX

ID: 0.25 (mm)

Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32

Calibration End Date: 09/18/2019 17:14

Calibration ID: 28240

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	
1,1,2,2-Tetrachloroethane	DCBd 4	Lin2	++++ 81378	++++ 212223	8492 338270	19906 503703	41033 772001	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150	
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	++++ 18122	++++ 49407	1584 77580	1952 119201	4516 182233	9180 182233	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,2,3-Trichloropropane	DCBd 4	Ave	++++ 24855	++++ 65181	2545 102396	5995 152039	13070 227650	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150	
Isopropylbenzene	CBNZ d5	Ave	++++ 305186	++++ 895501	15942 1334007	25126 2077872	68073 3255860	140340 3255860	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Bromobenzene	DCBd 4	Lin2	++++ 94131	++++ 262961	6809 405262	9199 625017	21642 982346	44717 982346	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
N-Propylbenzene	DCBd 4	Lin2	++++ 88020	++++ 259257	4852 392366	7282 623922	18995 980291	40408 980291	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
2-Chlorotoluene	DCBd 4	Lin2	++++ 83813	++++ 236551	5216 362365	7882 570632	18723 885290	39943 885290	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
4-Chlorotoluene	DCBd 4	Lin2	++++ 229719	++++ 647091	16109 980716	21672 1501889	52890 2355725	108930 2355725	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,3,5-Trimethylbenzene	DCBd 4	Lin2	++++ 272550	++++ 784349	16064 1180228	22950 1840658	61446 2904001	126728 2904001	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
t-Butylbenzene	DCBd 4	Lin2	++++ 236486	++++ 684550	13102 1037487	19416 1628495	53194 2568724	107022 2568724	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,2,4-Trimethylbenzene	DCBd 4	Lin2	++++ 280168	++++ 797912	18164 1206253	25143 1872482	64021 2951262	132188 2951262	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
sec-Butylbenzene	DCBd 4	Lin2	++++ 342385	++++ 994735	18664 1488371	28033 2335909	77905 3647396	157978 3647396	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
Benzyl chloride	DCBd 4	Lin2	++++ 161509	++++ 435247	15564 712621	38205 1194564	79681 1572093	79681 1572093	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,3-Dichlorobenzene	FB	Ave	++++ 189389	++++ 515580	18485 827202	42753 1248351	87723 1970021	87723 1970021	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
4-Isopropyltoluene	DCBd 4	Lin2	++++ 313200	++++ 926928	26239 1417705	70695 2274237	144269 3626884	144269 3626884	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,4-Dichlorobenzene	DCBd 4	Ave	++++ 191637	++++ 544476	18937 860222	44275 1349911	89169 2138308	89169 2138308	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,2,3-Trimethylbenzene	DCBd 4	Lin2	++++ 297305	++++ 829439	20902 1263125	27884 1921455	71531 3019517	141152 3019517	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,2-Dichlorobenzene	DCBd 4	Lin2	++++ 183790	++++ 506740	18047 791843	44125 1207180	88373 1876017	88373 1876017	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
n-Butylbenzene	DCBd 4	Lin2	++++ 268368	++++ 770051	15583 1157645	22594 1832341	63083 2837001	124426 2837001	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	++++ 17361	++++ 46937	1718 81885	4327 123542	8805 179309	8805 179309	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,3,5-Trichlorobenzene	DCBd 4	Lin2	++++ 134540	++++ 375307	10104 596151	13445 939342	31634 1448043	63142 1448043	++++ 20.0	1.00 50.0	2.00 75.0	5.00 100	10.0 150

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8	LVL 9	LVL 10	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10
1,2,4-Trichlorobenzene	CBNZ d5	Ave	++++ 114284	++++ 318617	12260 519088	28095 806265	55594 1235742	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Naphthalene	DCBd 4	Lin2	++++ 221097	++++ 588238	23304 1014664	56865 1524920	114525 2247987	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Hexachlorobutadiene	DCBd 4	Lin2	++++ 24901	++++ 71662	2117 114198	5808 180006	11687 275148	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
1,2,3-Trichlorobenzene	DCBd 4	Lin2	++++ 97290	++++ 264096	10357 441073	24583 680767	48178 1020703	++++ 20.0	++++ 50.0	2.00 75.0	5.00 100	10.0 150
Dibromofluoromethane (Surr)	FB	Ave	69948 74931	71260 78440	72984 74517	67236 82662	70876 85445	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5
1,2-Dichloroethane-d4 (Surr)	FB	Ave	73796 72595	73166 75840	71483 73892	68631 80673	70385 85028	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5
Trifluorotoluene (Surr)	FB	Ave	136309 143181	136253 153452	137084 151414	129640 169183	135479 173103	20.0 20.0	20.0 20.0	20.0 20.0	20.0 20.0	20.0 20.0
Toluene-d8 (Surr)	CBNZ d5	Ave	239307 249727	239305 265947	238266 260626	229285 284709	235655 295766	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	94953 100240	95586 108004	94522 104103	89969 116200	95069 122689	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5	19.5 19.5

Curve Type Legend:

<p>Ave = Average ISTD          Lin1 = Linear 1/conc ISTD          Lin2 = Linear 1/conc^2 ISTD          Qua1 = Quadratic 1/conc ISTD          Qua2 = Quadratic 1/conc^2 ISTD</p>
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FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 580-311491/2	091819_0007.D
Level 2	IC 580-311491/3	091819_0008.D
Level 3	IC 580-311491/4	091819_0009.D
Level 4	IC 580-311491/5	091819_0010.D
Level 5	IC 580-311491/6	091819_0011.D
Level 6	ICIS 580-311491/7	091819_0012.D
Level 7	IC 580-311491/8	091819_0013.D
Level 8	IC 580-311491/9	091819_0014.D
Level 9	IC 580-311491/10	091819_0018.D
Level 10	IC 580-311491/11	091819_0016.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Dichlorodifluoromethane	+++++	4.3						30				
Chloromethane	5.4						50					
Vinyl chloride	+++++	2.8						50				
Butadiene	+++++	-7.9						50				
Bromomethane	-7.7						30					
Chloroethane	8.9						30					
Dichlorofluoromethane	+++++	8.4						50				
Acrolein	+++++	7.7						30				
Acetonitrile	+++++	-4.1						30				
Trichlorofluoromethane	+++++	+++++	0.7						30			
Isopropyl alcohol	+++++	+++++	-4.4	+++++					30			
Acetone	+++++	3.5						30				
Ethyl ether	-4.9						30					
1,1-Dichloroethene	+++++	-5.0						50				



FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
t-Butyl alcohol	+++++	+++++	-25.1						30			
Acrylonitrile	+++++	0.6						30				
Iodomethane	+++++	-8.8						50				
Methylene Chloride	+++++	-0.9						30				
Methyl acetate	+++++	8.7						50				
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	6.5						30				
3-Chloro-1-propene	17.7						50					
Carbon disulfide	+++++	6.2						30				
trans-1,2-Dichloroethene	10.8						50					
Methyl tert-butyl ether	+++++	14.4						50				
Propionitrile	+++++	6.6						30				
1,1-Dichloroethane	8.7						50					
Vinyl acetate	+++++	-0.3						50				
2-Chloro-1,3-butadiene	+++++	-14.1						50				
Hexane	+++++	+++++	2.7						30			
2-Butanone	+++++	32.4						50				
Diisopropyl ether	+++++	6.2						50				
Methacrylonitrile	+++++	5.3						30				
cis-1,2-Dichloroethene	+++++	13.5						50				
Ethyl acetate	+++++	3.8						30				
Bromochloromethane	7.3						50					

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Chloroform	+++++	7.9						50				
Ethyl t-butyl ether	+++++	7.1						50				
Isobutanol	+++++	+++++	-4.4						50			
2,2-Dichloropropane	+++++	0.2						50				
Tetrahydrofuran	+++++	7.7						30				
1,2-Dichloroethane	3.1						30					
1,1,1-Trichloroethane	+++++	6.8						30				
n-Butyl alcohol	+++++	+++++	-3.2						30			
1,1-Dichloropropene	+++++	7.2						30				
Cyclohexane	+++++	+++++	1.3						30			
Carbon tetrachloride	+++++	+++++	-1.1						30			
Benzene	+++++	4.7						50				
Tert-amyl methyl ether	+++++	3.7						30				
Ethyl acrylate	+++++	17.1						50				
n-Heptane	+++++	-15.2						50				
Dibromomethane	+++++	3.8						30				
1,2-Dichloropropane	+++++	7.7						50				
2-Nitropropane	+++++	+++++	1.6						30			
Trichloroethene	+++++	-7.2						50				
Bromodichloromethane	+++++	5.6						30				
Methyl methacrylate	+++++	11.9						50				

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
2-Chloroethyl vinyl ether	+++++	5.2						30				
Methylcyclohexane	+++++	4.6						30				
cis-1,3-Dichloropropene	+++++	1.2						30				
4-Methyl-2-pentanone	+++++	9.8						30				
trans-1,3-Dichloropropene	+++++	7.1						30				
1,1,2-Trichloroethane	8.9						30					
Ethyl methacrylate	+++++	21.6						50				
Toluene	+++++	5.3						50				
1,3-Dichloropropane	+++++	5.7						30				
2-Hexanone	+++++	+++++	-2.3						30			
Dibromochloromethane	+++++	+++++	-7.4						50			
n-Butyl acetate	+++++	+++++	-2.6						50			
1,2-Dibromoethane	+++++	24.3						50				
Tetrachloroethene	+++++	3.6						30				
1,1,1,2-Tetrachloroethane	+++++	+++++	-4.8						50			
Chlorobenzene	+++++	6.8						30				
Ethylbenzene	+++++	7.3						30				
m-Xylene & p-Xylene	+++++	7.9						30				
Bromoform	+++++	+++++	-13.5						50			
Styrene	+++++	8.2						30				
o-Xylene	+++++	5.1						30				

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
1,1,2,2-Tetrachloroethane	+++++	+++++	-2.5						30			
trans-1,4-Dichloro-2-butene	+++++	20.1						30				
1,2,3-Trichloropropane	+++++	+++++	10.2						50			
Isopropylbenzene	+++++	3.8						50				
Bromobenzene	+++++	9.1						30				
N-Propylbenzene	+++++	9.5						30				
2-Chlorotoluene	+++++	6.7						30				
4-Chlorotoluene	+++++	9.3						30				
1,3,5-Trimethylbenzene	+++++	9.3						30				
t-Butylbenzene	+++++	9.0						30				
1,2,4-Trimethylbenzene	+++++	9.3						30				
sec-Butylbenzene	+++++	8.3						30				
Benzyl chloride	+++++	+++++	-0.2						30			
1,3-Dichlorobenzene	+++++	+++++	-5.3						50			
4-Isopropyltoluene	+++++	+++++	1.9						30			
1,4-Dichlorobenzene	+++++	+++++	2.6						50			
1,2,3-Trimethylbenzene	+++++	8.9						30				
1,2-Dichlorobenzene	+++++	+++++	-0.7						30			
n-Butylbenzene	+++++	8.4						30				
1,2-Dibromo-3-Chloropropane	+++++	+++++	-1.1						30			
1,3,5-Trichlorobenzene	+++++	9.8						30				

FORM VI  
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 311491

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 GC Column: DB-VRX ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/18/2019 11:32 Calibration End Date: 09/18/2019 17:14 Calibration ID: 28240

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
1,2,4-Trichlorobenzene	+++++	+++++	1.9						50			
Naphthalene	+++++	+++++	-2.0						30			
Hexachlorobutadiene	+++++	+++++	0.5						30			
1,2,3-Trichlorobenzene	+++++	+++++	-0.5						30			
Dibromofluoromethane (Surr)	-0.7						50					
1,2-Dichloroethane-d4 (Surr)	5.1						50					
Trifluorotoluene (Surr)	-1.0						50					
Toluene-d8 (Surr)	1.3						50					
4-Bromofluorobenzene (Surr)	0.0						50					

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 580-311491/13 Calibration Date: 09/18/2019 18:03  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 091819\_0020.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Qua2		0.5652	0.1000	16.6	20.0	-17.2	30.0
Chloromethane	Ave	0.3189	0.2765	0.1000	17.3	20.0	-13.3	30.0
Vinyl chloride	Ave	0.8448	0.6886	0.1000	16.3	20.0	-18.5	30.0
Butadiene	Ave	0.2965	0.2432		16.4	20.0	-18.0	30.0
Bromomethane	Lin2		0.6196	0.1000	18.1	20.0	-9.5	30.0
Chloroethane	Lin2		0.1730	0.0600	17.9	20.0	-10.5	30.0
Dichlorofluoromethane	Ave	0.5188	0.4562		17.6	20.0	-12.1	30.0
Acrolein	Lin2		0.0418		108	120	-10.1	30.0
Acetonitrile	Lin2		0.0275		219	250	-12.2	30.0
Trichlorofluoromethane	Lin2		0.9625	0.1000	16.6	20.0	-17.2	30.0
Isopropyl alcohol	Lin2		0.0129		161	200	-19.7	30.0
Acetone	Lin2		0.0598	0.0200	82.6	100	-17.4	30.0
Ethyl ether	Lin1		0.1863		19.9	20.0	-0.3	30.0
1,1-Dichloroethene	Ave	0.5164	0.4328	0.1000	16.8	20.0	-16.2	30.0
t-Butyl alcohol	Qua1		0.0182		160	200	-20.2	30.0
Acrylonitrile	Lin2		0.0546		168	200	-16.1	30.0
Iodomethane	Ave	0.4829	0.4454		18.4	20.0	-7.8	30.0
Methylene Chloride	Lin2		0.2662	0.1000	18.9	20.0	-5.6	30.0
Methyl acetate	Ave	0.1455	0.1273	0.1000	35.0	40.0	-12.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.3537	0.1000	17.8	20.0	-11.2	30.0
3-Chloro-1-propene	Ave	0.3159	0.2876		18.2	20.0	-9.0	30.0
Carbon disulfide	Lin2		0.6068	0.1000	17.8	20.0	-11.0	30.0
trans-1,2-Dichloroethene	Ave	0.2414	0.2263	0.1000	18.7	20.0	-6.3	30.0
Methyl tert-butyl ether	Ave	0.6246	0.6015	0.1000	19.3	20.0	-3.7	30.0
Propionitrile	Lin2		0.0247		228	250	-8.6	30.0
1,1-Dichloroethane	Ave	0.9219	0.8938	0.2000	19.4	20.0	-3.0	30.0
Vinyl acetate	Ave	0.0498	0.0479		48.1	50.0	-3.8	30.0
2-Chloro-1,3-butadiene	Ave	0.5683	0.5461		19.2	20.0	-3.9	30.0
Hexane	Lin2		0.2599		16.8	20.0	-16.2	30.0
2-Butanone	Ave	0.0651	0.0547	0.0200	84.0	100	-16.0	30.0
Diisopropyl ether	Ave	0.6724	0.6505		24.2	25.0	-3.3	30.0
Methacrylonitrile	Qua2		0.0282		188	200	-5.9	30.0
cis-1,2-Dichloroethene	Ave	0.6640	0.6557	0.1000	19.7	20.0	-1.3	30.0
Ethyl acetate	Lin2		0.1608		36.6	40.0	-8.5	30.0
Bromochloromethane	Ave	0.1553	0.1522		19.6	20.0	-2.0	30.0
Chloroform	Ave	1.056	1.033	0.2000	19.6	20.0	-2.2	30.0
Ethyl t-butyl ether	Ave	0.6544	0.6371		24.3	25.0	-2.6	30.0
Isobutanol	Ave	0.0142	0.0125		439	500	-12.2	30.0
2,2-Dichloropropane	Ave	0.2760	0.2502		18.1	20.0	-9.3	30.0
Tetrahydrofuran	Lin2		0.0486		35.9	40.0	-10.4	30.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Lab Sample ID: ICV 580-311491/13 Calibration Date: 09/18/2019 18:03

Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32

GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14

Lab File ID: 091819\_0020.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Lin2		0.2940	0.1000	19.9	20.0	-0.3	30.0
1,1,1-Trichloroethane	Lin2		0.3428	0.1000	18.6	20.0	-7.2	30.0
n-Butyl alcohol	Lin2		0.0052		422	500	-15.5	30.0
1,1-Dichloropropene	Lin2		0.2721		18.4	20.0	-8.0	30.0
Cyclohexane	Lin2		0.6991	0.1000	17.4	20.0	-12.8	30.0
Carbon tetrachloride	Qua2		0.2883	0.1000	20.4	20.0	2.1	30.0
Benzene	Ave	2.179	2.156	0.5000	19.8	20.0	-1.1	30.0
Tert-amyl methyl ether	Lin2		0.6659		25.1	25.0	0.4	30.0
Ethyl acrylate	Ave	0.2831	0.2571		18.2	20.0	-9.2	30.0
n-Heptane	Ave	0.2667	0.2443		18.3	20.0	-8.4	30.0
Dibromomethane	Lin2		0.1603		19.7	20.0	-1.6	30.0
1,2-Dichloropropane	Ave	0.5381	0.5279	0.1000	19.6	20.0	-1.9	30.0
2-Nitropropane	Qua2		0.0530		40.2	40.0	0.6	30.0
Trichloroethene	Ave	0.6653	0.6545	0.2000	19.7	20.0	-1.6	30.0
Bromodichloromethane	Lin2		0.7754	0.2000	19.9	20.0	-0.5	30.0
Methyl methacrylate	Ave	0.1690	0.1594		37.7	40.0	-5.7	30.0
2-Chloroethyl vinyl ether	Lin2		0.1924		19.4	20.0	-2.9	30.0
Methylcyclohexane	Qua2		0.8650	0.1000	19.6	20.0	-2.2	30.0
cis-1,3-Dichloropropene	Lin2		0.7662	0.2000	20.4	20.0	2.2	30.0
4-Methyl-2-pentanone	Qua2		0.4196	0.0600	96.2	100	-3.8	30.0
trans-1,3-Dichloropropene	Lin2		0.8522	0.1000	20.0	20.0	0.0	30.0
1,1,2-Trichloroethane	Lin2		0.5257	0.1000	20.6	20.0	2.9	30.0
Ethyl methacrylate	Ave	0.6609	0.6205		18.8	20.0	-6.1	30.0
Toluene	Ave	1.490	1.453	0.4000	19.5	20.0	-2.5	30.0
1,3-Dichloropropane	Lin2		0.8650		20.2	20.0	1.1	30.0
2-Hexanone	Lin2		0.1565	0.0600	92.2	100	-7.8	30.0
Dibromochloromethane	Ave	0.6795	0.6869	0.1000	20.2	20.0	1.1	30.0
n-Butyl acetate	Ave	0.7233	0.6802		18.8	20.0	-6.0	30.0
1,2-Dibromoethane	Ave	0.5887	0.5706	0.1000	19.4	20.0	-3.1	30.0
Tetrachloroethene	Qua2		0.2107	0.2000	20.2	20.0	0.8	30.0
1,1,1,2-Tetrachloroethane	Ave	0.6940	0.6998		20.2	20.0	0.8	30.0
Chlorobenzene	Lin2		1.819	0.5000	20.2	20.0	0.8	30.0
Ethylbenzene	Lin2		0.8951	0.1000	19.4	20.0	-2.9	30.0
m-Xylene & p-Xylene	Lin2		2.155	0.1000	19.6	20.0	-1.8	30.0
Bromoform	Ave	0.4490	0.4382	0.1000	19.5	20.0	-2.4	30.0
Styrene	Qua2		1.748	0.3000	22.0	20.0	9.8	30.0
1,1,2,2-Tetrachloroethane	Lin2		0.5983	0.3000	19.3	20.0	-3.5	30.0
o-Xylene	Qua2		1.145	0.3000	20.8	20.0	3.9	30.0
trans-1,4-Dichloro-2-butene	Lin1		0.1248		17.3	20.0	-13.3	30.0
1,2,3-Trichloropropane	Ave	0.1927	0.1900		19.7	20.0	-1.4	30.0
Isopropylbenzene	Ave	2.878	2.780	0.1000	19.3	20.0	-3.4	30.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 580-311491/13 Calibration Date: 09/18/2019 18:03  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 091819\_0020.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromobenzene	Lin2		0.7524		20.7	20.0	3.7	30.0
N-Propylbenzene	Lin2		0.6842		19.7	20.0	-1.6	30.0
2-Chlorotoluene	Lin2		0.6534		20.0	20.0	0.1	30.0
4-Chlorotoluene	Lin2		1.795		20.4	20.0	1.9	30.0
1,3,5-Trimethylbenzene	Lin2		2.101		19.9	20.0	-0.7	30.0
t-Butylbenzene	Lin2		1.809		19.6	20.0	-2.1	30.0
1,2,4-Trimethylbenzene	Lin2		2.179		20.1	20.0	0.5	30.0
sec-Butylbenzene	Lin2		2.620		19.6	20.0	-1.9	30.0
Benzyl chloride	Lin2		1.041		16.3	20.0	-18.7	30.0
1,3-Dichlorobenzene	Ave	0.7437	0.7040	0.6000	18.9	20.0	-5.3	30.0
4-Isopropyltoluene	Lin2		2.382		18.7	20.0	-6.6	30.0
1,4-Dichlorobenzene	Ave	1.541	1.494	0.5000	19.4	20.0	-3.0	30.0
1,2,3-Trimethylbenzene	Lin2		2.301		20.2	20.0	1.0	30.0
1,2-Dichlorobenzene	Lin2		1.422	0.4000	19.8	20.0	-1.0	30.0
n-Butylbenzene	Lin2		2.024		19.3	20.0	-3.3	30.0
1,2-Dibromo-3-Chloropropane	Lin2		0.1312	0.0500	18.6	20.0	-6.8	30.0
1,3,5-Trichlorobenzene	Lin2		1.041		19.7	20.0	-1.5	30.0
1,2,4-Trichlorobenzene	Ave	1.132	1.061	0.2000	18.7	20.0	-6.3	30.0
Naphthalene	Lin2		1.689		19.0	20.0	-5.1	30.0
Hexachlorobutadiene	Lin2		0.1950		19.3	20.0	-3.4	30.0
1,2,3-Trichlorobenzene	Lin2		0.7497		19.1	20.0	-4.3	30.0
Dibromofluoromethane (Surr)	Ave	0.2798	0.2807		19.6	19.5	0.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2790	0.2712		19.0	19.5	-2.8	30.0
Trifluorotoluene (Surr)	Ave	0.5335	0.5487		20.6	20.0	2.8	30.0
Toluene-d8 (Surr)	Ave	2.290	2.305		19.6	19.5	0.6	30.0
4-Bromofluorobenzene (Surr)	Ave	0.9202	0.9313		19.7	19.5	1.2	30.0



FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 580-314028/2 Calibration Date: 10/11/2019 11:11  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Qua2		0.6753	0.1000	19.7	20.0	-1.6	20.0
Chloromethane	Ave	0.3189	0.2512	0.1000	15.8	20.0	-21.2*	20.0
Vinyl chloride	Ave	0.8448	0.6368	0.1000	15.1	20.0	-24.6*	20.0
Butadiene	Ave	0.2965	0.2389		16.1	20.0	-19.4	20.0
Bromomethane	Lin2		0.3732	0.1000	10.9	20.0	-45.7*	20.0
Chloroethane	Lin2		0.1110	0.0600	11.4	20.0	-43.0*	20.0
Dichlorofluoromethane	Ave	0.5188	0.2910		11.2	20.0	-43.9*	20.0
Acrolein	Lin2		0.0281		71.5	120	-40.4*	20.0
Acetonitrile	Lin2		0.0209		167	250	-33.4*	20.0
Trichlorofluoromethane	Lin2		0.8298	0.1000	14.4	20.0	-28.2*	20.0
Isopropyl alcohol	Lin2		0.0102		126	200	-37.1*	20.0
Acetone	Lin2		0.0538	0.0200	73.6	100	-26.4*	20.0
Ethyl ether	Lin1		0.1447		15.4	20.0	-22.8*	20.0
1,1-Dichloroethene	Ave	0.5164	0.4814	0.1000	18.6	20.0	-6.8	20.0
t-Butyl alcohol	Qua1		0.0194		171	200	-14.6	20.0
Acrylonitrile	Lin2		0.0508		156	200	-22.0*	20.0
Iodomethane	Ave	0.4829	0.4206		17.4	20.0	-12.9	20.0
Methylene Chloride	Lin2		0.2547	0.1000	18.0	20.0	-9.8	20.0
Methyl acetate	Ave	0.1455	0.1249	0.1000	34.3	40.0	-14.2	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.4501	0.1000	22.5	20.0	12.6	20.0
3-Chloro-1-propene	Ave	0.3159	0.3154		20.0	20.0	-0.2	20.0
Carbon disulfide	Lin2		0.7022	0.1000	20.6	20.0	2.9	20.0
trans-1,2-Dichloroethene	Ave	0.2414	0.2342	0.1000	19.4	20.0	-3.0	20.0
Methyl tert-butyl ether	Ave	0.6246	0.5943	0.1000	19.0	20.0	-4.9	20.0
Propionitrile	Lin2		0.0242		223	250	-10.7	20.0
1,1-Dichloroethane	Ave	0.9219	0.9384	0.2000	20.4	20.0	1.8	20.0
Vinyl acetate	Ave	0.0498	0.0463		46.5	50.0	-6.9	20.0
2-Chloro-1,3-butadiene	Ave	0.5683	0.6615		23.3	20.0	16.4	20.0
Hexane	Lin2		0.3267		20.9	20.0	4.5	20.0
2-Butanone	Ave	0.0651	0.0604	0.0200	92.8	100	-7.2	20.0
Diisopropyl ether	Ave	0.6724	0.6607		24.6	25.0	-1.7	20.0
Methacrylonitrile	Qua2		0.0282		188	200	-6.0	20.0
cis-1,2-Dichloroethene	Ave	0.6640	0.6549	0.1000	19.7	20.0	-1.4	20.0
Ethyl acetate	Lin2		0.1658		37.8	40.0	-5.6	20.0
Bromochloromethane	Ave	0.1553	0.1430		18.4	20.0	-7.9	20.0
Chloroform	Ave	1.056	1.041	0.2000	19.7	20.0	-1.4	20.0
Ethyl t-butyl ether	Ave	0.6544	0.6415		24.5	25.0	-2.0	20.0
Isobutanol	Ave	0.0142	0.0122		430	500	-14.1	20.0
2,2-Dichloropropane	Ave	0.2760	0.3111		22.5	20.0	12.7	20.0
Tetrahydrofuran	Lin2		0.0518		38.3	40.0	-4.2	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 580-314028/2 Calibration Date: 10/11/2019 11:11  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Lin2		0.2917	0.1000	19.8	20.0	-1.0	20.0
1,1,1-Trichloroethane	Lin2		0.3781	0.1000	20.4	20.0	2.2	20.0
n-Butyl alcohol	Lin2		0.0052		417	500	-16.6	20.0
1,1-Dichloropropene	Lin2		0.3111		21.0	20.0	5.0	20.0
Cyclohexane	Lin2		0.8836	0.1000	21.8	20.0	9.2	20.0
Carbon tetrachloride	Qua2		0.3286	0.1000	23.1	20.0	15.3	20.0
Benzene	Ave	2.179	2.218	0.5000	20.4	20.0	1.8	20.0
Tert-amyl methyl ether	Lin2		0.6472		24.4	25.0	-2.4	20.0
Ethyl acrylate	Ave	0.2831	0.2735		19.3	20.0	-3.4	20.0
n-Heptane	Ave	0.2667	0.3189		23.9	20.0	19.6	20.0
Dibromomethane	Lin2		0.1512		18.6	20.0	-7.2	20.0
1,2-Dichloropropane	Ave	0.5381	0.5397	0.1000	20.1	20.0	0.3	20.0
2-Nitropropane	Qua2		0.0551		41.8	40.0	4.6	20.0
Trichloroethene	Ave	0.6653	0.6796	0.2000	20.4	20.0	2.1	20.0
Bromodichloromethane	Lin2		0.7788	0.2000	20.0	20.0	-0.0	20.0
Methyl methacrylate	Ave	0.1690	0.1654		39.2	40.0	-2.1	20.0
2-Chloroethyl vinyl ether	Lin2		0.2029		20.5	20.0	2.4	20.0
Methylcyclohexane	Qua2		1.035	0.1000	23.2	20.0	16.1	20.0
cis-1,3-Dichloropropene	Lin2		0.8200	0.2000	21.9	20.0	9.4	20.0
4-Methyl-2-pentanone	Qua2		0.4420	0.0600	101	100	1.4	20.0
trans-1,3-Dichloropropene	Lin2		0.8757	0.1000	20.6	20.0	2.8	20.0
1,1,2-Trichloroethane	Lin2		0.5076	0.1000	19.8	20.0	-0.8	20.0
Ethyl methacrylate	Ave	0.6609	0.6387		19.3	20.0	-3.4	20.0
Toluene	Ave	1.490	1.519	0.4000	20.4	20.0	2.0	20.0
1,3-Dichloropropane	Lin2		0.8719		20.4	20.0	2.0	20.0
2-Hexanone	Lin2		0.1675	0.0600	98.7	100	-1.3	20.0
Dibromochloromethane	Ave	0.6795	0.6679	0.1000	19.7	20.0	-1.7	20.0
n-Butyl acetate	Ave	0.7233	0.7078		19.6	20.0	-2.1	20.0
1,2-Dibromoethane	Ave	0.5887	0.5521	0.1000	18.8	20.0	-6.2	20.0
Tetrachloroethene	Qua2		0.2267	0.2000	21.6	20.0	7.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.6940	0.6751		19.5	20.0	-2.7	20.0
Chlorobenzene	Lin2		1.790	0.5000	19.9	20.0	-0.7	20.0
Ethylbenzene	Lin2		0.9472	0.1000	20.5	20.0	2.7	20.0
m-Xylene & p-Xylene	Lin2		2.265	0.1000	20.6	20.0	3.2	20.0
Bromoform	Ave	0.4490	0.4460	0.1000	19.9	20.0	-0.7	20.0
Styrene	Qua2		1.729	0.3000	21.7	20.0	8.6	20.0
1,1,2,2-Tetrachloroethane	Lin2		0.5984	0.3000	19.3	20.0	-3.5	20.0
o-Xylene	Qua2		1.153	0.3000	20.9	20.0	4.7	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1453		20.3	20.0	1.5	20.0
1,2,3-Trichloropropane	Ave	0.1927	0.1791		18.6	20.0	-7.1	20.0
Isopropylbenzene	Ave	2.878	2.975	0.1000	20.7	20.0	3.4	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 580-314028/2 Calibration Date: 10/11/2019 11:11  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0003.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromobenzene	Lin2		0.7549		20.8	20.0	4.0	20.0
N-Propylbenzene	Lin2		0.7429		21.4	20.0	6.9	20.0
2-Chlorotoluene	Lin2		0.6828		20.9	20.0	4.7	20.0
4-Chlorotoluene	Lin2		1.902		21.6	20.0	8.1	20.0
1,3,5-Trimethylbenzene	Lin2		2.238		21.2	20.0	5.8	20.0
t-Butylbenzene	Lin2		1.959		21.2	20.0	6.1	20.0
1,2,4-Trimethylbenzene	Lin2		2.314		21.4	20.0	6.8	20.0
sec-Butylbenzene	Lin2		2.862		21.4	20.0	7.2	20.0
Benzyl chloride	Lin2		1.278		20.0	20.0	-0.2	20.0
1,3-Dichlorobenzene	Ave	0.7437	0.6973	0.6000	18.8	20.0	-6.2	20.0
4-Isopropyltoluene	Lin2		2.477		19.4	20.0	-3.0	20.0
1,4-Dichlorobenzene	Ave	1.541	1.474	0.5000	19.1	20.0	-4.3	20.0
1,2,3-Trimethylbenzene	Lin2		2.015		17.6	20.0	-11.9	20.0
1,2-Dichlorobenzene	Lin2		1.273	0.4000	17.7	20.0	-11.4	20.0
n-Butylbenzene	Lin2		2.049		19.6	20.0	-2.1	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.1367	0.0500	19.4	20.0	-2.9	20.0
1,3,5-Trichlorobenzene	Lin2		1.139		21.6	20.0	8.1	20.0
1,2,4-Trichlorobenzene	Ave	1.132	1.133	0.2000	20.0	20.0	0.0	20.0
Naphthalene	Lin2		1.984		22.3	20.0	11.7	20.0
Hexachlorobutadiene	Lin2		0.2156		21.3	20.0	6.6	20.0
1,2,3-Trichlorobenzene	Lin2		0.8238		21.1	20.0	5.3	20.0
Dibromofluoromethane (Surr)	Ave	0.2798	0.2726		19.0	19.5	-2.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2790	0.2767		19.3	19.5	-0.8	20.0
Trifluorotoluene (Surr)	Ave	0.5335	0.5224		19.6	20.0	-2.1	20.0
Toluene-d8 (Surr)	Ave	2.290	2.348		20.0	19.5	2.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.9202	0.9277		19.7	19.5	0.8	20.0

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 580-314028/5 Calibration Date: 10/11/2019 12:26  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0006.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Qua2		0.5107	0.1000		1.00	3.5	
Chloromethane	Ave	0.3189	0.2841	0.1000		1.00	-10.9	
Vinyl chloride	Ave	0.8448	0.5891	0.1000	0.697	1.00	-30.3	
Butadiene	Ave	0.2965	0.2038			1.00	-31.3	
Bromomethane	Lin2		0.4979	0.1000		1.00	-37.7	
Chloroethane	Lin2		0.1430	0.0600		1.00	-48.3	
Dichlorofluoromethane	Ave	0.5188	0.3887		0.749	1.00	-25.1	
Acrolein	Lin2		0.0318			6.00	-83.2	
Acetonitrile	Lin2		0.0258			12.5	-33.4	
Trichlorofluoromethane	Lin2		0.7657	0.1000	1.28	1.00	27.6	
Isopropyl alcohol	Lin2		0.0134			10.0	-74.9	
Acetone	Lin2		0.0702	0.0200		5.00	-151.5	
Ethyl ether	Lin1		0.1460		0.594	1.00	-40.6	
1,1-Dichloroethene	Ave	0.5164	0.4422	0.1000	0.856	1.00	-14.4	
t-Butyl alcohol	Qua1		0.0200			10.0	-74.4	
Acrylonitrile	Lin2		0.0517			10.0	-18.4	
Iodomethane	Ave	0.4829	0.4111		0.851	1.00	-14.9	
Methylene Chloride	Lin2		0.3311	0.1000		1.00	-24.1	
Methyl acetate	Ave	0.1455	0.1251	0.1000		2.00	-14.1	
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.5202	0.1000	1.63	1.00	63.4	
3-Chloro-1-propene	Ave	0.3159	0.2928		0.927	1.00	-7.3	
Carbon disulfide	Lin2		0.8306	0.1000	1.31	1.00	30.9	
trans-1,2-Dichloroethene	Ave	0.2414	0.2336	0.1000	0.967	1.00	-3.3	
Methyl tert-butyl ether	Ave	0.6246	0.6054	0.1000	0.969	1.00	-3.1	
1,1-Dichloroethane	Ave	0.9219	0.9356	0.2000	1.01	1.00	1.5	
Propionitrile	Lin2		0.0230			12.5	-51.9	
Vinyl acetate	Ave	0.0498	0.0403		2.02	2.50	-19.1	
2-Chloro-1,3-butadiene	Ave	0.5683	0.8453		1.49	1.00	48.7	
Hexane	Lin2		0.2423		1.35	1.00	35.5	
2-Butanone	Ave	0.0651	0.0556	0.0200		5.00	-14.7	
Diisopropyl ether	Ave	0.6724	0.6187		1.15	1.25	-8.0	
Methacrylonitrile	Qua2		0.0239		6.72	10.0	-32.8	
cis-1,2-Dichloroethene	Ave	0.6640	0.6145	0.1000	0.925	1.00	-7.5	
Ethyl acetate	Lin2		0.1639		1.55	2.00	-22.7	
Bromochloromethane	Ave	0.1553	0.1405		0.905	1.00	-9.5	
Chloroform	Ave	1.056	1.002	0.2000	0.949	1.00	-5.1	
Ethyl t-butyl ether	Ave	0.6544	0.5976		1.14	1.25	-8.7	
Isobutanol	Ave	0.0142	0.0114			25.0	-19.7	
2,2-Dichloropropane	Ave	0.2760	0.2724		0.987	1.00	-1.3	
Tetrahydrofuran	Lin2		0.0520			2.00	-56.9	

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 580-314028/5 Calibration Date: 10/11/2019 12:26  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0006.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloroethane	Lin2		0.3053	0.1000	0.790	1.00	-21.0	
1,1,1-Trichloroethane	Lin2		0.3035	0.1000	1.04	1.00	4.2	
n-Butyl alcohol	Lin2		0.0050			25.0	-47.6	
1,1-Dichloropropene	Lin2		0.2504		1.15	1.00	15.1	
Cyclohexane	Lin2		0.6679	0.1000	1.57	1.00	57.5	
Carbon tetrachloride	Qua2		0.2633	0.1000	1.39	1.00	39.1	
Benzene	Ave	2.179	2.094	0.5000	0.961	1.00	-3.9	
Tert-amyl methyl ether	Lin2		0.6110			1.25	-18.9	
Ethyl acrylate	Ave	0.2831	0.2377			1.00	-16.0	
n-Heptane	Ave	0.2667	0.2524		0.946	1.00	-5.4	
Dibromomethane	Lin2		0.1461		0.815	1.00	-18.5	
1,2-Dichloropropane	Ave	0.5381	0.5304	0.1000	0.986	1.00	-1.4	
2-Nitropropane	Qua2		0.0485			2.00	-14.5	
Trichloroethene	Ave	0.6653	0.6141	0.2000	0.923	1.00	-7.7	
Bromodichloromethane	Lin2		0.7047	0.2000	0.787	1.00	-21.3	
Methyl methacrylate	Ave	0.1690	0.1437			2.00	-14.9	
2-Chloroethyl vinyl ether	Lin2		0.1978			1.00	-27.8	
Methylcyclohexane	Qua2		0.7711	0.1000	1.07	1.00	7.5	
cis-1,3-Dichloropropene	Lin2		1.188	0.2000	1.43	1.00	42.7	
4-Methyl-2-pentanone	Qua2		0.3977	0.0600		5.00	-73.5	
trans-1,3-Dichloropropene	Lin2		0.8168	0.1000	0.782	1.00	-21.8	
1,1,2-Trichloroethane	Lin2		0.4484	0.1000	0.297	1.00	-70.3	
Ethyl methacrylate	Ave	0.6609	0.5362			1.00	-18.9	
Toluene	Ave	1.490	1.453	0.4000	0.975	1.00	-2.5	
1,3-Dichloropropane	Lin2		0.8056		0.624	1.00	-37.6	
2-Hexanone	Lin2		0.1393	0.0600		5.00	-20.9	
Dibromochloromethane	Ave	0.6795	0.5927	0.1000	0.872	1.00	-12.8	
n-Butyl acetate	Ave	0.7233	0.6983			1.00	-3.5	
1,2-Dibromoethane	Ave	0.5887	0.5161	0.1000	0.877	1.00	-12.3	
Tetrachloroethene	Qua2		0.1864*	0.2000	1.08	1.00	8.5	
1,1,1,2-Tetrachloroethane	Ave	0.6940	0.6270		0.903	1.00	-9.7	
Chlorobenzene	Lin2		1.757	0.5000	0.749	1.00	-25.1	
Ethylbenzene	Lin2		0.8465	0.1000	0.947	1.00	-5.3	
m-Xylene & p-Xylene	Lin2		2.031	0.1000	0.873	1.00	-12.7	
Bromoform	Ave	0.4490	0.3862	0.1000	0.860	1.00	-14.0	
Styrene	Qua2		1.438	0.3000		1.00	-34.6	
1,1,2,2-Tetrachloroethane	Lin2		0.8445	0.3000	1.01	1.00	0.7	
o-Xylene	Qua2		1.032	0.3000	0.729	1.00	-27.1	
trans-1,4-Dichloro-2-butene	Lin1		0.2021			1.00	-20.9	
1,2,3-Trichloropropane	Ave	0.1927	0.2723		1.41	1.00	41.3	
Isopropylbenzene	Ave	2.878	2.471	0.1000	0.859	1.00	-14.1	

FORM VII  
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 580-314028/5 Calibration Date: 10/11/2019 12:26  
 Instrument ID: SEA102 Calib Start Date: 09/18/2019 11:32  
 GC Column: DB-VRX ID: 0.25 (mm) Calib End Date: 09/18/2019 17:14  
 Lab File ID: 101119\_0006.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromobenzene	Lin2		1.190		1.20	1.00	20.0	
N-Propylbenzene	Lin2		1.041		1.45	1.00	45.2	
2-Chlorotoluene	Lin2		1.005		1.30	1.00	30.4	
4-Chlorotoluene	Lin2		2.828		1.21	1.00	20.6	
1,3,5-Trimethylbenzene	Lin2		3.083		1.31	1.00	31.0	
t-Butylbenzene	Lin2		1.767		0.886	1.00	-11.4	
1,2,4-Trimethylbenzene	Lin2		2.135		0.702	1.00	-29.8	
sec-Butylbenzene	Lin2		2.521		0.884	1.00	-11.6	
Benzyl chloride	Lin2		1.156		0.868	1.00	-13.2	
1,3-Dichlorobenzene	Ave	0.7437	0.4051*	0.6000	0.545	1.00	-45.5	
4-Isopropyltoluene	Lin2		2.159		1.18	1.00	18.4	
1,4-Dichlorobenzene	Ave	1.541	1.532	0.5000	0.994	1.00	-0.6	
1,2,3-Trimethylbenzene	Lin2		2.127			1.00	-48.9	
1,2-Dichlorobenzene	Lin2		1.308	0.4000	0.790	1.00	-21.0	
n-Butylbenzene	Lin2		2.034		0.837	1.00	-16.3	
1,2-Dibromo-3-Chloropropane	Lin2		0.1225	0.0500		1.00	-19.3	
1,3,5-Trichlorobenzene	Lin2		1.029		0.493	1.00	-50.7	
1,2,4-Trichlorobenzene	Ave	1.132	0.6801	0.2000	0.601	1.00	-39.9	
Naphthalene	Lin2		2.239		1.02	1.00	1.9	
Hexachlorobutadiene	Lin2		0.1813		1.17	1.00	17.1	
1,2,3-Trichlorobenzene	Lin2		0.8580			1.00	-13.6	
Dibromofluoromethane (Surr)	Ave	0.2798	0.2684		18.7	19.5	-4.1	
1,2-Dichloroethane-d4 (Surr)	Ave	0.2790	0.2822		19.7	19.5	1.2	
Trifluorotoluene (Surr)	Ave	0.5335	0.5288		19.8	20.0	-0.9	
Toluene-d8 (Surr)	Ave	2.290	2.391		20.4	19.5	4.4	
4-Bromofluorobenzene (Surr)	Ave	0.9202	0.9293		19.7	19.5	1.0	

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 580-314028/6  
 Matrix: Water Lab File ID: 101119\_0007.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 12:50  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	ND		3.0	0.53
108-88-3	Toluene	ND		2.0	0.39
100-41-4	Ethylbenzene	ND		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	ND		3.0	0.75
95-47-6	o-Xylene	ND		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
98-08-8	Trifluorotoluene (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-126

FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 580-314028/3  
 Matrix: Water Lab File ID: 101119\_0004.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 11:36  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	9.73		3.0	0.53
108-88-3	Toluene	9.51		2.0	0.39
100-41-4	Ethylbenzene	9.50		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	9.67		3.0	0.75
95-47-6	o-Xylene	9.71		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	101		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-126



FORM I  
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 580-314028/4  
 Matrix: Water Lab File ID: 101119\_0005.D  
 Analysis Method: 8260C Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/11/2019 12:01  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: DB-VRX ID: 0.25 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314028 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-43-2	Benzene	10.3		3.0	0.53
108-88-3	Toluene	10.3		2.0	0.39
100-41-4	Ethylbenzene	10.4		3.0	0.50
179601-23-1	m-Xylene & p-Xylene	10.4		3.0	0.75
95-47-6	o-Xylene	10.8		2.0	0.39

CAS NO.	SURROGATE	%REC	Q	LIMITS
2037-26-5	Toluene-d8 (Surr)	105		80-120
98-08-8	Trifluorotoluene (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-126

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Start Date: 09/18/2019 11:07Analysis Batch Number: 311491 End Date: 09/18/2019 18:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-311491/1		09/18/2019 11:07	1	091819_0006.D	DB-VRX 0.25 (mm)
IC 580-311491/2		09/18/2019 11:32	1	091819_0007.D	DB-VRX 0.25 (mm)
IC 580-311491/3		09/18/2019 11:57	1	091819_0008.D	DB-VRX 0.25 (mm)
IC 580-311491/4		09/18/2019 12:21	1	091819_0009.D	DB-VRX 0.25 (mm)
IC 580-311491/5		09/18/2019 12:47	1	091819_0010.D	DB-VRX 0.25 (mm)
IC 580-311491/6		09/18/2019 13:11	1	091819_0011.D	DB-VRX 0.25 (mm)
ICIS 580-311491/7		09/18/2019 13:36	1	091819_0012.D	DB-VRX 0.25 (mm)
IC 580-311491/8		09/18/2019 14:01	1	091819_0013.D	DB-VRX 0.25 (mm)
IC 580-311491/9		09/18/2019 14:26	1	091819_0014.D	DB-VRX 0.25 (mm)
IC 580-311491/11		09/18/2019 16:24	1	091819_0016.D	DB-VRX 0.25 (mm)
ZZZZZ		09/18/2019 16:49	1		DB-VRX 0.25 (mm)
IC 580-311491/10		09/18/2019 17:14	1	091819_0018.D	DB-VRX 0.25 (mm)
ICV 580-311491/13		09/18/2019 18:03	1	091819_0020.D	DB-VRX 0.25 (mm)

## GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA102 Start Date: 10/11/2019 10:46Analysis Batch Number: 314028 End Date: 10/11/2019 16:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-314028/1		10/11/2019 10:46	1	101119_0002.D	DB-VRX 0.25 (mm)
CCVIS 580-314028/2		10/11/2019 11:11	1	101119_0003.D	DB-VRX 0.25 (mm)
LCS 580-314028/3		10/11/2019 11:36	1	101119_0004.D	DB-VRX 0.25 (mm)
LCSD 580-314028/4		10/11/2019 12:01	1	101119_0005.D	DB-VRX 0.25 (mm)
CCVL 580-314028/5		10/11/2019 12:26	1	101119_0006.D	DB-VRX 0.25 (mm)
MB 580-314028/6		10/11/2019 12:50	1	101119_0007.D	DB-VRX 0.25 (mm)
580-89872-8		10/11/2019 13:41	1	101119_0008.D	DB-VRX 0.25 (mm)
580-89872-1		10/11/2019 14:06	1	101119_0009.D	DB-VRX 0.25 (mm)
580-89872-2		10/11/2019 14:30	1	101119_0010.D	DB-VRX 0.25 (mm)
580-89872-3		10/11/2019 14:55	1	101119_0011.D	DB-VRX 0.25 (mm)
580-89872-4		10/11/2019 15:20	1	101119_0012.D	DB-VRX 0.25 (mm)
580-89872-5		10/11/2019 15:45	1	101119_0013.D	DB-VRX 0.25 (mm)
580-89872-6		10/11/2019 16:10	1	101119_0014.D	DB-VRX 0.25 (mm)
580-89872-7		10/11/2019 16:34	1	101119_0015.D	DB-VRX 0.25 (mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 311491 Batch Start Date: 09/18/19 11:07 Batch Analyst: Ruslander, Amanda P

Batch Method: 8260C Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS/TFT 00011	VOAMasterMix 00043	VOAMasterSEC 00035	
BFB 580-311491/1		8260C		5 mL	5 mL	2 uL			
IC 580-311491/2		8260C		5 mL	5 mL	2 uL	0.5 uL		
IC 580-311491/3		8260C		5 mL	5 mL	2 uL	1 uL		
IC 580-311491/4		8260C		5 mL	5 mL	2 uL	2 uL		
IC 580-311491/5		8260C		5 mL	5 mL	2 uL	5 uL		
IC 580-311491/6		8260C		5 mL	5 mL	2 uL	10 uL		
ICIS 580-311491/7		8260C		5 mL	5 mL	2 uL	20 uL		
IC 580-311491/8		8260C		5 mL	5 mL	2 uL	50 uL		
IC 580-311491/9		8260C		5 mL	5 mL	2 uL	75 uL		
IC 580-311491/10		8260C		5 mL	5 mL	2 uL	100 uL		
IC 580-311491/11		8260C		5 mL	5 mL	2 uL	150 uL		
ICV 580-311491/13		8260C		5 mL	5 mL	2 uL		20 uL	

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 314028 Batch Start Date: 10/11/19 10:46 Batch Analyst: Jantanu, Charinporn

Batch Method: 8260C Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00011	VOAMasterMix 00043	
BFB 580-314028/1		8260C		5 mL	5 mL		2 uL		
CCVIS 580-314028/2		8260C		5 mL	5 mL		2 uL	20 uL	
LCS 580-314028/3		8260C		5 mL	5 mL		2 uL	10 uL	
LCSD 580-314028/4		8260C		5 mL	5 mL		2 uL	10 uL	
CCVL 580-314028/5		8260C		5 mL	5 mL		2 uL	1 uL	
MB 580-314028/6		8260C		5 mL	5 mL		2 uL		
580-89872-D-8	Trip Blank	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-D-1	EQB-1-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-2	MW-6-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-3	MW-5-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-4	MW-4-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-5	MW-11-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-6	MW-10-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		
580-89872-A-7	BD-1-W-191009	8260C	T	5 mL	5 mL	<2 SU	2 uL		

Batch Notes	
Vial Lot Number	0217701e

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Method AK101

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Alaska - Gasoline Range Organics  
(GC) by Method AK101

FORM II  
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #	BFB1 #
EQB-1-W-191009	580-89872-1	116	95
MW-4-W-191009	580-89872-4	113	102
MW-11-W-191009	580-89872-5	113	98
MW-10-W-191009	580-89872-6	113	96
Trip Blank	580-89872-8	117	93
	MB 580-314105/5	116	95
	MB 580-314127/5	117	96
	LCS 580-314105/6	110	97
	LCS 580-314127/6	110	96
	LCSD 580-314105/7	107	97
	LCSD 580-314127/7	106	95

TFT = Trifluorotoluene (Surr)  
BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS  
50-150  
50-150

# Column to be used to flag recovery values

FORM II AK101

FORM III  
 GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 10121906.D

Lab ID: LCS 580-314105/6 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Gasoline Range Organics (GRO) -C6-C10	1.00	0.976	98	77-123	

# Column to be used to flag recovery and RPD values



FORM III  
 GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 10131906.D

Lab ID: LCS 580-314127/6 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Gasoline Range Organics (GRO) -C6-C10	1.00	0.991	99	77-123	

# Column to be used to flag recovery and RPD values

FORM III  
 GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Matrix: Water Level: Low Lab File ID: 10121907.D

Lab ID: LCSD 580-314105/7 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Gasoline Range Organics (GRO) -C6-C10	1.00	0.982	98	1	20	77-123	

# Column to be used to flag recovery and RPD values

FORM III  
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: 10131907.D  
 Lab ID: LCSD 580-314127/7 Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Gasoline Range Organics (GRO) -C6-C10	1.00	0.987	99	0	20	77-123	

# Column to be used to flag recovery and RPD values  
FORM III AK101

FORM IV  
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 580-314105/5  
 Matrix: Water Date Extracted: 10/12/2019 14:42  
 Lab File ID: (1) 10121905.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 10/12/2019 14:42 Date Analyzed: (2) \_\_\_\_\_  
 Instrument ID: (1) SEA047 Instrument ID: (2) \_\_\_\_\_  
 GC Column: (1) RTX-VRX ID: 0.45 (mm) GC Column: (2) \_\_\_\_\_ ID: \_\_\_\_\_

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 580-314105/6	10/12/2019 15:12	
	LCSD 580-314105/7	10/12/2019 15:43	
EQB-1-W-191009	580-89872-1	10/12/2019 16:13	
Trip Blank	580-89872-8	10/12/2019 16:44	

FORM IV  
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: MB 580-314127/5  
 Matrix: Water Date Extracted: 10/13/2019 11:29  
 Lab File ID: (1) 10131905.D Lab File ID: (2) \_\_\_\_\_  
 Date Analyzed: (1) 10/13/2019 11:29 Date Analyzed: (2) \_\_\_\_\_  
 Instrument ID: (1) SEA047 Instrument ID: (2) \_\_\_\_\_  
 GC Column: (1) RTX-VRX ID: 0.45 (mm) GC Column: (2) \_\_\_\_\_ ID: \_\_\_\_\_

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 580-314127/6	10/13/2019 11:59	
	LCSD 580-314127/7	10/13/2019 12:30	
MW-4-W-191009	580-89872-4	10/13/2019 13:31	
MW-11-W-191009	580-89872-5	10/13/2019 14:01	
MW-10-W-191009	580-89872-6	10/13/2019 14:31	

FORM VIII  
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: STD1000 580-307784/8 Date Analyzed: 08/07/2019 15:38  
 Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm)  
 Lab File ID (Standard): 08071908.D Heated Purge: (Y/N) N  
 Calibration ID: 28085

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSS IS GIVEN BELOW:

				TFT	BFB	
				RT #	RT #	
INITIAL CALIBRATION SURROGATE				6.12	9.70	
UPPER LIMIT				6.17	9.75	
LOWER LIMIT				6.07	9.65	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
STD1000 580-307784/8 ICRT		08/07/2019 15:38	08071908.D	6.12	9.70	
ICV 580-307784/13		08/07/2019 18:10	08071913.D	6.12	9.70	

TFT = Trifluorotoluene (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

TFT RT Limit = ± 0.05 minutes of surrogate RT  
 BFB RT Limit = ± 0.05 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM VIII  
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVRT 580-314105/4 Date Analyzed: 10/12/2019 14:11  
 Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm)  
 Lab File ID (Standard): 10121904.D Heated Purge: (Y/N) N  
 Calibration ID: 28085

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSS IS GIVEN BELOW:

				TFT	BFB	
				RT #	RT #	
CONTINUING CALIBRATION SURROGATE				6.14	9.72	
UPPER LIMIT				6.19	9.77	
LOWER LIMIT				6.09	9.67	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 580-314105/4		10/12/2019 14:11	10121904.D	6.14	9.72	
MB 580-314105/5		10/12/2019 14:42	10121905.D	6.14	9.72	
LCS 580-314105/6		10/12/2019 15:12	10121906.D	6.14	9.72	
LCSD 580-314105/7		10/12/2019 15:43	10121907.D	6.13	9.72	
580-89872-1	EQB-1-W-191009	10/12/2019 16:13	10121908.D	6.14	9.73	
580-89872-8	Trip Blank	10/12/2019 16:44	10121909.D	6.14	9.72	
CCV 580-314105/15		10/13/2019 08:28	10121915.D	6.14	9.72	

TFT = Trifluorotoluene (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

TFT RT Limit = ± 0.05 minutes of surrogate RT  
 BFB RT Limit = ± 0.05 minutes of surrogate RT

# Column used to flag values outside QC limits

FORM VIII  
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVRT 580-314127/4 Date Analyzed: 10/13/2019 10:58  
 Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm)  
 Lab File ID (Standard): 10131904.D Heated Purge: (Y/N) N  
 Calibration ID: 28085

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSS IS GIVEN BELOW:

				TFT	BFB	
				RT #	RT #	
CONTINUING CALIBRATION SURROGATE				6.15	9.74	
UPPER LIMIT				6.20	9.79	
LOWER LIMIT				6.10	9.69	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 580-314127/4		10/13/2019 10:58	10131904.D	6.15	9.74	
MB 580-314127/5		10/13/2019 11:29	10131905.D	6.15	9.74	
LCS 580-314127/6		10/13/2019 11:59	10131906.D	6.15	9.74	
LCSD 580-314127/7		10/13/2019 12:30	10131907.D	6.16	9.74	
580-89872-4	MW-4-W-191009	10/13/2019 13:31	10131909.D	6.15	9.74	
580-89872-5	MW-11-W-191009	10/13/2019 14:01	10131910.D	6.15	9.74	
580-89872-6	MW-10-W-191009	10/13/2019 14:31	10131911.D	6.15	9.74	
CCV 580-314127/15		10/13/2019 16:34	10131915.D	6.15	9.74	

TFT = Trifluorotoluene (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

TFT RT Limit = ± 0.05 minutes of surrogate RT  
 BFB RT Limit = ± 0.05 minutes of surrogate RT

# Column used to flag values outside QC limits



FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: EQB-1-W-191009 Lab Sample ID: 580-89872-1  
 Matrix: Water Lab File ID: 10121908.D  
 Analysis Method: AK101 Date Collected: 10/09/2019 09:00  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/12/2019 16:13  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314105 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	116		50-150
460-00-4	4-Bromofluorobenzene (Surr)	95		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-4-W-191009 Lab Sample ID: 580-89872-4  
 Matrix: Water Lab File ID: 10131909.D  
 Analysis Method: AK101 Date Collected: 10/09/2019 11:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 13:31  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	0.47		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	113		50-150
460-00-4	4-Bromofluorobenzene (Surr)	102		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-11-W-191009 Lab Sample ID: 580-89872-5  
 Matrix: Water Lab File ID: 10131910.D  
 Analysis Method: AK101 Date Collected: 10/09/2019 11:40  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 14:01  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	113		50-150
460-00-4	4-Bromofluorobenzene (Surr)	98		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: MW-10-W-191009 Lab Sample ID: 580-89872-6  
 Matrix: Water Lab File ID: 10131911.D  
 Analysis Method: AK101 Date Collected: 10/09/2019 12:10  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 14:31  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	113		50-150
460-00-4	4-Bromofluorobenzene (Surr)	96		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: Trip Blank Lab Sample ID: 580-89872-8  
 Matrix: Water Lab File ID: 10121909.D  
 Analysis Method: AK101 Date Collected: 10/09/2019 00:01  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/12/2019 16:44  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314105 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	117		50-150
460-00-4	4-Bromofluorobenzene (Surr)	93		50-150

FORM VI  
 GASOLINE RANGE ORGANICS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 307784

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2019 13:36 Calibration End Date: 08/07/2019 17:39 Calibration ID: 28085

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD50 580-307784/12	08071912.D
Level 2	STD100 580-307784/11	08071911.D
Level 3	STD250 580-307784/10	08071910.D
Level 4	STD500 580-307784/9	08071909.D
Level 5	STD1000 580-307784/8	08071908.D
Level 6	STD5000 580-307784/7	08071907.D
Level 7	STD10000 580-307784/6	08071906.D
Level 8	STD15000 580-307784/5	08071905.D
Level 9	STD25000 580-307784/4	08071904.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8	LVL 9		RT WINDOW	AVG RT
Gasoline Range Organics (GRO)-C6-C10	6.857	6.857	6.857	6.857	6.857	6.857	6.857	6.857	6.857		3.397 - 10.317	6.857
Trifluorotoluene (Surr)	6.123	6.123	6.120	6.117	6.120	6.120	6.120	+++++	+++++		6.017 - 6.217	6.120
4-Bromofluorobenzene (Surr)	9.703	9.707	9.703	9.700	9.703	9.700	+++++	+++++	+++++		9.600 - 9.800	9.703

FORM VI  
 GASOLINE RANGE ORGANICS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 307784

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2019 13:36 Calibration End Date: 08/07/2019 17:39 Calibration ID: 28085

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD50 580-307784/12	08071912.D
Level 2	STD100 580-307784/11	08071911.D
Level 3	STD250 580-307784/10	08071910.D
Level 4	STD500 580-307784/9	08071909.D
Level 5	STD1000 580-307784/8	08071908.D
Level 6	STD5000 580-307784/7	08071907.D
Level 7	STD10000 580-307784/6	08071906.D
Level 8	STD15000 580-307784/5	08071905.D
Level 9	STD25000 580-307784/4	08071904.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Gasoline Range Organics (GRO)-C6-C10	12038 7405.3 7018.0	10491 6938.2	8445.9 7014.3	8009.6 7307.3	Lin1	294512.097	7072.33229			6.2			1.0000			0.9900
Trifluorotoluene (Surr)	9118.2 8225.4 ++++	8268.2 8293.6	8325.8 8172.3	7925.4 ++++	Ave		8332.71451			25.00	4.5	25.0				
4-Bromofluorobenzene (Surr)	5732.5 5914.6 ++++	5817.8 7214.3	5916.2 ++++	5615.7 ++++	Ave		6035.15667			25.00	9.8	25.0				

Note: The M1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI  
 GASOLINE RANGE ORGANICS BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA  
 RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1 Analy Batch No.: 307784

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 GC Column: RTX-VRX ID: 0.45 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/07/2019 13:36 Calibration End Date: 08/07/2019 17:39 Calibration ID: 28085

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD50 580-307784/12	08071912.D
Level 2	STD100 580-307784/11	08071911.D
Level 3	STD250 580-307784/10	08071910.D
Level 4	STD500 580-307784/9	08071909.D
Level 5	STD1000 580-307784/8	08071908.D
Level 6	STD5000 580-307784/7	08071907.D
Level 7	STD10000 580-307784/6	08071906.D
Level 8	STD15000 580-307784/5	08071905.D
Level 9	STD25000 580-307784/4	08071904.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
		LVL 6	LVL 7	LVL 8	LVL 9		LVL 6	LVL 7	LVL 8	LVL 9	
Gasoline Range Organics (GRO)-C6-C10	Lin1	601881	1049146	2111487	4004795	7405266	50.0	100	250	500	1000
		34690981	70143084	109609904	175449772		5000	10000	15000	25000	
Trifluorotoluene (Surr)	Ave	182292	330597	499349	633778	822210	20.0	40.0	60.0	80.0	100.0
		1243549	1633802	++++	++++		150	200	++++	++++	
4-Bromofluorobenzene (Surr)	Ave	573249	581779	591617	561566	591458	100	100	100	100	100
		721425	++++	++++	++++		100	++++	++++	++++	

Curve Type Legend:

Ave = Average  
 Lin1 = Linear 1/conc



FORM VII  
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 580-307784/13 Calibration Date: 08/07/2019 18:10  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 08071913.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Gasoline Range Organics (GRO)-C6-C10	Lin1		6929		938	1000	-6.2	25.0
Trifluorotoluene (Surr)	Ave	8333	8556		61.6	60.0	2.7	25.0
4-Bromofluorobenzene (Surr)	Ave	6035	5916		98.0	100	-2.0	25.0

FORM VII  
 GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 580-307784/13 Calibration Date: 08/07/2019 18:10  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 08071913.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Gasoline Range Organics (GRO)-C6-C10	6.86	3.40	10.32
Trifluorotoluene (Surr)	6.12	6.02	6.22
4-Bromofluorobenzene (Surr)	9.70	9.60	9.80

FORM VII  
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVRT 580-314105/4 Calibration Date: 10/12/2019 14:11  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10121904.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Gasoline Range Organics (GRO)-C6-C10	Lin1		7034		953	1000	-4.7	25.0
Trifluorotoluene (Surr)	Ave	8333	8857		63.8	60.0	6.3	25.0
4-Bromofluorobenzene (Surr)	Ave	6035	6112		101	100	1.3	25.0

FORM VII  
 GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVRT 580-314105/4 Calibration Date: 10/12/2019 14:11  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10121904.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Gasoline Range Organics (GRO)-C6-C10	6.85	3.41	10.30
Trifluorotoluene (Surr)	6.14	6.04	6.24
4-Bromofluorobenzene (Surr)	9.72	9.62	9.82

FORM VII  
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 580-314105/15 Calibration Date: 10/13/2019 08:28  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10121915.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Gasoline Range Organics (GRO)-C6-C10	Lin1		7806		1060	1000	6.2	25.0
Trifluorotoluene (Surr)	Ave	8333	8941		64.4	60.0	7.3	25.0
4-Bromofluorobenzene (Surr)	Ave	6035	6164		102	100	2.1	25.0

FORM VII  
 GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 580-314105/15 Calibration Date: 10/13/2019 08:28  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10121915.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Gasoline Range Organics (GRO)-C6-C10	6.85	3.41	10.30
Trifluorotoluene (Surr)	6.14	6.04	6.24
4-Bromofluorobenzene (Surr)	9.72	9.62	9.82

FORM VII  
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVRT 580-314127/4 Calibration Date: 10/13/2019 10:58  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10131904.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Gasoline Range Organics (GRO)-C6-C10	Lin1		7217		979	1000	-2.1	25.0
Trifluorotoluene (Surr)	Ave	8333	9129		65.7	60.0	9.6	25.0
4-Bromofluorobenzene (Surr)	Ave	6035	5835		96.7	100	-3.3	25.0

FORM VII  
 GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVRT 580-314127/4 Calibration Date: 10/13/2019 10:58  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10131904.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Gasoline Range Organics (GRO)-C6-C10	6.90	3.43	10.37
Trifluorotoluene (Surr)	6.15	6.05	6.25
4-Bromofluorobenzene (Surr)	9.74	9.64	9.84



FORM VII  
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 580-314127/15 Calibration Date: 10/13/2019 16:34  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10131915.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Gasoline Range Organics (GRO)-C6-C10	Lin1		7318		993	1000	-0.7	25.0
Trifluorotoluene (Surr)	Ave	8333	9000		64.8	60.0	8.0	25.0
4-Bromofluorobenzene (Surr)	Ave	6035	5921		98.1	100	-1.9	25.0

FORM VII  
 GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 580-314127/15 Calibration Date: 10/13/2019 16:34  
 Instrument ID: SEA047 Calib Start Date: 08/07/2019 13:36  
 GC Column: RTX-VRX ID: 0.45 (mm) Calib End Date: 08/07/2019 17:39  
 Lab File ID: 10131915.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		FROM	TO
Gasoline Range Organics (GRO)-C6-C10	6.90	3.43	10.37
Trifluorotoluene (Surr)	6.15	6.05	6.25
4-Bromofluorobenzene (Surr)	9.74	9.64	9.84

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 580-314105/5  
 Matrix: Water Lab File ID: 10121905.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/12/2019 14:42  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314105 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	116		50-150
460-00-4	4-Bromofluorobenzene (Surr)	95		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 580-314127/5  
 Matrix: Water Lab File ID: 10131905.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 11:29  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	ND		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	117		50-150
460-00-4	4-Bromofluorobenzene (Surr)	96		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 580-314105/6  
 Matrix: Water Lab File ID: 10121906.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/12/2019 15:12  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314105 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	0.976		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	110		50-150
460-00-4	4-Bromofluorobenzene (Surr)	97		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 580-314127/6  
 Matrix: Water Lab File ID: 10131906.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 11:59  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	0.991		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	110		50-150
460-00-4	4-Bromofluorobenzene (Surr)	96		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 580-314105/7  
 Matrix: Water Lab File ID: 10121907.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/12/2019 15:43  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314105 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	0.982		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	107		50-150
460-00-4	4-Bromofluorobenzene (Surr)	97		50-150

FORM I  
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 580-314127/7  
 Matrix: Water Lab File ID: 10131907.D  
 Analysis Method: AK101 Date Collected: \_\_\_\_\_  
 Sample wt/vol: 5 (mL) Date Analyzed: 10/13/2019 12:30  
 Soil Aliquot Vol: \_\_\_\_\_ Dilution Factor: 1  
 Soil Extract Vol.: \_\_\_\_\_ GC Column: RTX-VRX ID: 0.45 (mm)  
 % Moisture: \_\_\_\_\_ Level: (low/med) Low  
 Analysis Batch No.: 314127 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Gasoline Range Organics (GRO)-C6-C10	0.987		0.25	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	106		50-150
460-00-4	4-Bromofluorobenzene (Surr)	95		50-150



GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 Start Date: 08/07/2019 13:06

Analysis Batch Number: 307784 End Date: 08/07/2019 19:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
RTC 580-307784/3		08/07/2019 13:06	1		RTX-VRX 0.45 (mm)
STD25000 580-307784/4 IC		08/07/2019 13:36	1	08071904.D	RTX-VRX 0.45 (mm)
STD15000 580-307784/5 IC		08/07/2019 14:07	1	08071905.D	RTX-VRX 0.45 (mm)
STD10000 580-307784/6 IC		08/07/2019 14:37	1	08071906.D	RTX-VRX 0.45 (mm)
STD5000 580-307784/7 IC		08/07/2019 15:08	1	08071907.D	RTX-VRX 0.45 (mm)
STD1000 580-307784/8 ICRT		08/07/2019 15:38	1	08071908.D	RTX-VRX 0.45 (mm)
STD500 580-307784/9 IC		08/07/2019 16:08	1	08071909.D	RTX-VRX 0.45 (mm)
STD250 580-307784/10 IC		08/07/2019 16:39	1	08071910.D	RTX-VRX 0.45 (mm)
STD100 580-307784/11 IC		08/07/2019 17:09	1	08071911.D	RTX-VRX 0.45 (mm)
STD50 580-307784/12 IC		08/07/2019 17:39	1	08071912.D	RTX-VRX 0.45 (mm)
ICV 580-307784/13		08/07/2019 18:10	1	08071913.D	RTX-VRX 0.45 (mm)
ZZZZZ		08/07/2019 18:40	1		RTX-VRX 0.45 (mm)
ZZZZZ		08/07/2019 19:10	1		RTX-VRX 0.45 (mm)
ZZZZZ		08/07/2019 19:41	1		RTX-VRX 0.45 (mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 Start Date: 10/12/2019 13:40

Analysis Batch Number: 314105 End Date: 10/13/2019 08:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
RTC 580-314105/3		10/12/2019 13:40	1	10121903.D	RTX-VRX 0.45 (mm)
CCVRT 580-314105/4		10/12/2019 14:11	1	10121904.D	RTX-VRX 0.45 (mm)
MB 580-314105/5		10/12/2019 14:42	1	10121905.D	RTX-VRX 0.45 (mm)
LCS 580-314105/6		10/12/2019 15:12	1	10121906.D	RTX-VRX 0.45 (mm)
LCSD 580-314105/7		10/12/2019 15:43	1	10121907.D	RTX-VRX 0.45 (mm)
580-89872-1		10/12/2019 16:13	1	10121908.D	RTX-VRX 0.45 (mm)
580-89872-8		10/12/2019 16:44	1	10121909.D	RTX-VRX 0.45 (mm)
CCV 580-314105/15		10/13/2019 08:28	1	10121915.D	RTX-VRX 0.45 (mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Instrument ID: SEA047 Start Date: 10/13/2019 09:27

Analysis Batch Number: 314127 End Date: 10/13/2019 22:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/13/2019 09:27	1		RTX-VRX 0.45 (mm)
ZZZZZ		10/13/2019 09:57	1		RTX-VRX 0.45 (mm)
RTC 580-314127/3		10/13/2019 10:27	1	10131903.D	RTX-VRX 0.45 (mm)
CCVRT 580-314127/4		10/13/2019 10:58	1	10131904.D	RTX-VRX 0.45 (mm)
MB 580-314127/5		10/13/2019 11:29	1	10131905.D	RTX-VRX 0.45 (mm)
LCS 580-314127/6		10/13/2019 11:59	1	10131906.D	RTX-VRX 0.45 (mm)
LCSD 580-314127/7		10/13/2019 12:30	1	10131907.D	RTX-VRX 0.45 (mm)
580-89872-4		10/13/2019 13:31	1	10131909.D	RTX-VRX 0.45 (mm)
580-89872-5		10/13/2019 14:01	1	10131910.D	RTX-VRX 0.45 (mm)
580-89872-6		10/13/2019 14:31	1	10131911.D	RTX-VRX 0.45 (mm)
ZZZZZ		10/13/2019 15:33	10		RTX-VRX 0.45 (mm)
ZZZZZ		10/13/2019 16:03	10		RTX-VRX 0.45 (mm)
CCV 580-314127/15		10/13/2019 16:34	1	10131915.D	RTX-VRX 0.45 (mm)
ZZZZZ		10/13/2019 17:04	1		RTX-VRX 0.45 (mm)
CCV 580-314127/26		10/13/2019 22:09	1		RTX-VRX 0.45 (mm)
CCV 580-314127/44		10/13/2019 22:40	1		RTX-VRX 0.45 (mm)

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 307784 Batch Start Date: 08/07/19 13:06 Batch Analyst: Vaughan, Dmiitra C

Batch Method: AK101 Batch End Date: 08/14/19 14:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	BFBGRO ARCHON 00034	GRO BTEXBlend 00010	GRO_LCS 00054	Methanol 1L 00032
STD25000 580-307784/4 IC		AK101		5 mL	5 mL	1 uL		1250 uL	1250 uL
STD15000 580-307784/5 IC		AK101		5 mL	5 mL	1 uL		750 uL	1750 uL
STD10000 580-307784/6 IC		AK101		5 mL	5 mL	1 uL		500 uL	2000 uL
STD5000 580-307784/7 IC		AK101		5 mL	5 mL	1 uL		250 uL	2250 uL
STD1000 580-307784/8 ICRT		AK101		5 mL	5 mL	1 uL		50 uL	2450 uL
STD500 580-307784/9 IC		AK101		5 mL	5 mL	1 uL		25 uL	2475 uL
STD250 580-307784/10 IC		AK101		5 mL	5 mL	1 uL		12.5 uL	2500 uL
STD100 580-307784/11 IC		AK101		5 mL	5 mL	1 uL		5 uL	2500 uL
STD50 580-307784/12 IC		AK101		5 mL	5 mL	1 uL		2.5 uL	2500 uL
ICV 580-307784/13		AK101		5 mL	5 mL	1 uL	50 uL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	TFT Spike 00036	V2.4TFT-EX 00037				
STD25000 580-307784/4 IC		AK101		1 uL					
STD15000 580-307784/5 IC		AK101		1 uL					
STD10000 580-307784/6 IC		AK101		50 uL					
STD5000 580-307784/7 IC		AK101		37.5 uL					
STD1000 580-307784/8 ICRT		AK101		25 uL					
STD500 580-307784/9 IC		AK101		20 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 307784 Batch Start Date: 08/07/19 13:06 Batch Analyst: Vaughan, Dmitra C

Batch Method: AK101 Batch End Date: 08/14/19 14:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	TFT Spike 00036	V2.4TFT-EX 00037				
STD250 580-307784/10 IC		AK101		15 uL					
STD100 580-307784/11 IC		AK101		10 uL					
STD50 580-307784/12 IC		AK101		5 uL					
ICV 580-307784/13		AK101			2500 uL				

Batch Notes	
Pipette/Syringe/Dispenser ID	C25I, B50M, B100S, A500V, A1000X, C2500J
Vial Lot Number	0103701E

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 314105 Batch Start Date: 10/12/19 13:40 Batch Analyst: Stearns, Bryce E

Batch Method: AK101 Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00038	GRO_LCS 00057	RT_GRO_CUS 00022
RTC 580-314105/3		AK101		5 mL	5 mL		1 uL		22 uL
CCVRT 580-314105/4		AK101		5 mL	5 mL		1 uL	25 uL	
MB 580-314105/5		AK101		5 mL	5 mL		1 uL		
LCS 580-314105/6		AK101		5 mL	5 mL		1 uL	50 uL	
LCSD 580-314105/7		AK101		5 mL	5 mL		1 uL	50 uL	
580-89872-E-1	EQB-1-W-191009	AK101	T	5 mL	5 mL	<2 SU	1 uL		
580-89872-E-8	Trip Blank	AK101	T	5 mL	5 mL	<2 SU	1 uL		
CCV 580-314105/15		AK101		5 mL	5 mL		1 uL	25 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	TFT Spike 00038	V2.4TFFT-EX 00042				
RTC 580-314105/3		AK101			1250 uL				
CCVRT 580-314105/4		AK101			1250 uL				
MB 580-314105/5		AK101		10.75 uL					
LCS 580-314105/6		AK101			2500 uL				
LCSD 580-314105/7		AK101			2500 uL				
580-89872-E-1	EQB-1-W-191009	AK101	T	10.75 uL					
580-89872-E-8	Trip Blank	AK101	T	10.75 uL					
CCV 580-314105/15		AK101			1250 uL				

Batch Notes	
pH Indicator ID	0.0-6.0 LOT#6901002
Pipette/Syringe/Dispenser ID	B50N, C25N,C25000
Vial Lot Number	0217701E

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 314105 Batch Start Date: 10/12/19 13:40 Batch Analyst: Stearns, Bryce E

Batch Method: AK101 Batch End Date: \_\_\_\_\_

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 314127 Batch Start Date: 10/13/19 09:27 Batch Analyst: Stearns, Bryce E

Batch Method: AK101 Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	BFBGRO ARCHON 00038	GRO_LCS 00057	RT_GRO_CUS 00022
RTC 580-314127/3		AK101		5 mL	5 mL		1 uL		22 uL
CCVRT 580-314127/4		AK101		5 mL	5 mL		1 uL	25 uL	
MB 580-314127/5		AK101		5 mL	5 mL		1 uL		
LCS 580-314127/6		AK101		5 mL	5 mL		1 uL	50 uL	
LCSD 580-314127/7		AK101		5 mL	5 mL		1 uL	50 uL	
580-89872-B-4	MW-4-W-191009	AK101	T	5 mL	5 mL	<2 SU	1 uL		
580-89872-B-5	MW-11-W-191009	AK101	T	5 mL	5 mL	<2 SU	1 uL		
580-89872-B-6	MW-10-W-191009	AK101	T	5 mL	5 mL	<2 SU	1 uL		
CCV 580-314127/15		AK101		5 mL	5 mL		1 uL	25 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	TFT Spike 00038	V2.4TFT-EX 00042				
RTC 580-314127/3		AK101			1250 uL				
CCVRT 580-314127/4		AK101			1250 uL				
MB 580-314127/5		AK101		10.75 uL					
LCS 580-314127/6		AK101			2500 uL				
LCSD 580-314127/7		AK101			2500 uL				
580-89872-B-4	MW-4-W-191009	AK101	T	10.75 uL					
580-89872-B-5	MW-11-W-191009	AK101	T	10.75 uL					
580-89872-B-6	MW-10-W-191009	AK101	T	10.75 uL					
CCV 580-314127/15		AK101			1250 uL				

Batch Notes	
pH Indicator ID	6901002
Pipette/Syringe/Dispenser ID	C25N, B50N, C25000
Vial Lot Number	0217701E

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.



GASOLINE RANGE ORGANICS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89872-1

SDG No.: \_\_\_\_\_

Batch Number: 314127 Batch Start Date: 10/13/19 09:27 Batch Analyst: Stearns, Bryce E

Batch Method: AK101 Batch End Date: \_\_\_\_\_

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

# Shipping and Receiving Documents

Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: Nicole Moore  
 Tel/Fax: 503-785-9414  
 Date: 10.9.19  
 Carrier:   
 COC No: 249685  
 1 of 1 COCs

Client Contact  
 Company Name: Arcadis  
 Address: 11 SW Columbia St Suite 670  
 City/State/Zip: Portland OR 97201  
 Phone: 503-220-8201  
 Fax:   
 Project Name: Chevron 96459  
 Site: 1304 Airport Heights Anchorage AK  
 PO # 30010563

Site Contact: David Braubach  
 Lab Contact:   
 Perform MS / MSD (Y / N)   
 Filtered Sample (Y / N)   
 BTEX 8260  
 GLO 4561  
 580-89872 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
EQB-1-W-191009	10.9.19	0900	G	W	6	
MW-6-W-191009	10.9.19	0930	G	W	3	
MW-5-W-191009	10.9.19	1045	G	W	3	
MW-4-W-191009	10.9.19	1110	G	W	6	
MW-11-W-191009	10.9.19	1140	G	W	6	
MW-10-W-191009	10.9.19	1210	G	W	6	
BD-1-W-191009	10.9.19		G	W	6	EW 10.9.19
Trip Blank						

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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:  
 Type III Data Package

Custody Seal No.:   
 Relinquished by: E. W. J.   
 Date/Time: 10.9.19 1245  
 Company: Arcadis  
 Received by:   
 Date/Time: 10.9.19 12:45  
 Company: TA-AK  
 Relinquished by:   
 Date/Time:   
 Company:   
 Received in Laboratory by:   
 Date/Time:   
 Company:   
 Therm ID No.:   
 Cooler Temp. (°C): Obs'd: 1.8  
 Corrd: 1.8

Client Contact  
Company Name: Arcadis  
Address: 111 SW Gambria St Ste. 670  
City/State/Zip: Portland OR 97201  
Phone: 503-220-8201  
Fax: -  
Project Name: Chevron 94489  
Site: 1304 Airport Heights Anchorage AK  
P O # 30010563

Regulatory Program:  DW  NPDES  RCRA  Other  
Project Manager: Nicole Moore  
Site Contact: David Brubaker  
Lab Contact:  
Filtered Sample (Y/N)   
Perform MS/MSD (Y/N)   
GLO 45101  
BTEX 8260  
Sample Date:  2 weeks  1 week  2 days  1 day  
Analysis Turnaround Time:  CALENDAR DAYS  WORKING DAYS  
TAT if different from Below: Standard

Sample Identification  
Sample Date  
Sample Time  
Sample Type (G-Grab)  
Matrix  
# of Cont

Sample Identification	Sample Date	Sample Time	Sample Type (G-Grab)	Matrix	# of Cont	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)
EQB-1-W-19009	10.9.19	0900	G	W	6	X	X
MW-6-W-19009	10.9.19	0930	G	W	3	X	X
MW-5-W-19009	10.9.19	1045	G	W	3	X	X
MW-4-W-19009	10.9.19	1110	G	W	6	X	X
MW-11-W-19009	10.9.19	1140	G	W	6	X	X
MW-10-W-19009	10.9.19	1210	G	W	6	X	X
BD-1-W-19009	10.9.19	-	G	W	3	X	X
Trip Blank	-	-	-	-	6	X	X

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other  
Possible Hazard Identification:  
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  
Special Instructions/QC Requirements & Comments:  
Custody Seal No.:  Yes  No  
Cooler Temp. (°C): Obs'd. \_\_\_\_\_ Cor'd. 1.8  
Term ID No.: \_\_\_\_\_  
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Dispose by Lab  Archive for \_\_\_\_\_ Months

Therm ID: 91 Cor: 0.3 Inc: 0.4  
Cooler Desc: 15 Blue  
Packing: BUB  
FedEx: \_\_\_\_\_  
Lab Cont: \_\_\_\_\_  
Other: 65

Relinquished by: _____ Company: Arcadis Date/Time: 10.9.19 1245	Relinquished by: _____ Company: TA-AK Date/Time: 10.9.19 1345	Relinquished by: _____ Company: TA-AK Date/Time: 10.10.19 1340	Relinquished by: _____ Company: TA-AK Date/Time: 10.9.19 1245
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# Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-89872-1

**Login Number: 89872**  
**List Number: 1**  
**Creator: Pilch, Andrew C**

**List Source: Eurofins TestAmerica, Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	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.	True	
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	

# APPENDIX D

## ADEC Data Review Checklist



## Laboratory Data Review Checklist

Completed By:

Suresh PR

Title:

Project Chemist

Date:

November 20, 2019

CS Report Name:

Second Semi Annual 2019 Groundwater Monitoring Report

Report Date:

October 15, 2019

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Eurofins TestAmerica Laboratory, Seattle, WA

Laboratory Report Number:

580-89872-1

ADEC File Number:

2100.26.066

Hazard Identification Number:

23518

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes  No

Comments:

Yes.

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes  No

Comments:

No.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No

Comments:

Yes.

b. Correct Analyses requested?

Yes  No

Comments:

Yes.

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No

Comments:

Yes.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No

Comments:

Yes.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No

Comments:

Yes.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No

Comments:

No.



e. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

Yes.

b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No

Comments:

Yes.

c. Were all corrective actions documented?

Yes  No

Comments:

Yes

d. What is the effect on data quality/usability according to the case narrative?

Yes  No

Comments:

Data quality/usability was not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No

Comments:

Yes.

b. All applicable holding times met?

Yes  No

Comments:

Yes.

c. All soils reported on a dry weight basis?

Yes  No

Comments:

No soil samples were submitted for analysis.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

Yes.

e. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No

Comments:

Yes.

ii. All method blank results less than Method Detection Limit (MDL)?

Yes  No

Comments:

Yes.

iii. If above MDL, what samples are affected?

Yes  No

Comments:

No.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

No.

v. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes  No

Comments:

Yes.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No

Comments:

Metals/Inorganic analysis was not requested for submitted samples.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

Yes.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

Yes.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Yes  No

Comments:

None of the sample affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

No.

vii. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

c. Matrix spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No

Comments:

MS/MSD analysis was not requested on project specific sample in this data package.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

Not applicable.

iii. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

Not applicable

iv. If %R or RPD is outside of acceptable limits, what samples are affected?

Yes  No

Comments:

Not applicable

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

Not applicable

vi. Data quality or usability affected? (use comment box to explain)

Yes  No

Comments:

Data quality/usability was not affected.

d. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No

Comments:

Yes.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes  No

Comments:

Yes.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

No.

iv. Data quality or usability affected? (use comment box to explain)

Yes  No

Comments:

Data quality/usability was not affected.

e. Trip blank – Volatile analyses only (GRO, BTEX, etc): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?

(If not, enter explanation below.)

Yes  No

Comments:

Yes.

ii. All results less than MDL?

Yes  No

Comments:

Yes.

iii. If above MDL, what samples are affected?

Yes  No

Comments:

None of the data affected.

iv. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No

Comments:

Yes.

ii. Submitted blind to lab?

Yes  No

Comments:

BD-1-W-191009 was collected from MW-6-W-191009.

- iii. Precision – All relative percent differences (RPD) less than specified DQOs?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No

Comments:

The RPDs between parent and duplicate samples were acceptable.

- iv. Data quality or usability affected?

Yes  No

Comments:

Data quality/usability was not affected.

- g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

Yes  No

Equipment blank sample was collected as EQB-1-W-191009.

- i. If above MDL, what samples are affected?

Yes  No

Comments:

The compound toluene (0.54 J ug/l) was detected below the reporting limit in an equipment blank sample EQB-1-W-191009 for method SW846 8260C. A blank action level was established at five times of the detected blank concentration. Toluene result in sample MW-4-W-191009 was qualified as non-detect (UB) at the reporting limit.

- ii. Data quality or usability affected?

Equipment blank contamination considered as minor and would result in the non-detect of associated data. The reported data should still consider as usable.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes  No

Comments:

No.