



# Transmittal

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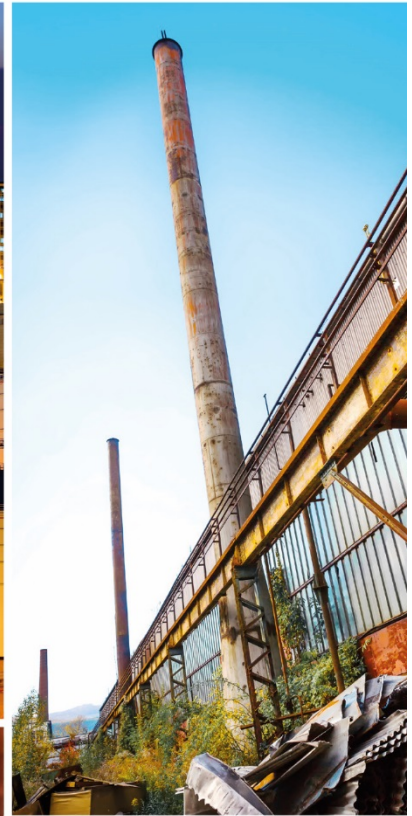
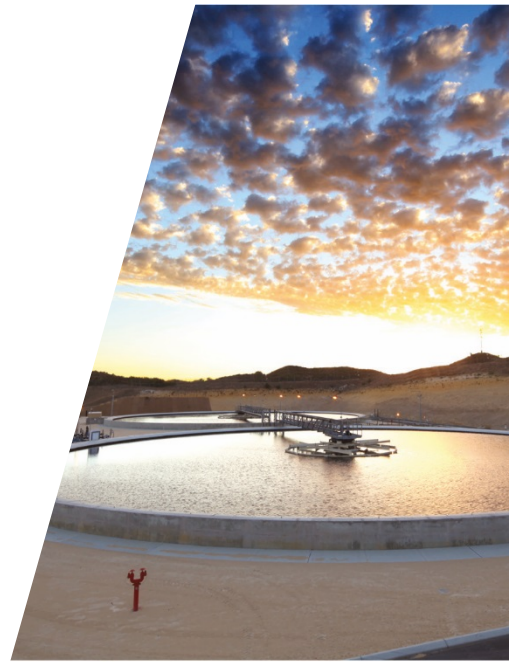
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# Second Semiannual 2018 Groundwater Monitoring Report

Former Chevron-Branded  
Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska  
ADEC File ID: 2100.26.008  
Hazard ID: 23885

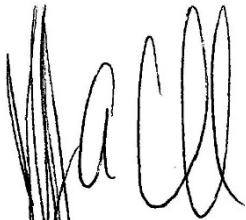
Chevron Environmental  
Management Company





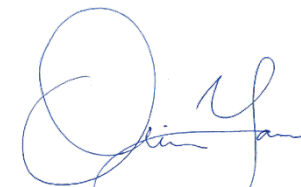
# Second Semiannual 2018 Groundwater Monitoring Report

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ADEC File ID: 2100.26.008  
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Jeffrey Cloud  
Chemist



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Oliver Yan  
Senior Staff Geologist



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Siobhan Pritchard, P.G.  
Senior Project Geologist

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## Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	air sparge
BTEX	benzene, toluene, ethylbenzene, and xylenes
COPCs	constituents of potential concern
CSM	conceptual site model
DRO	diesel range organics
ft btoc	feet below top of casing
GAC	granular activated carbon
GRO	gasoline range organics
HVOC	halogenated volatile organic compound
MOA	Municipality of Anchorage
mg/L	milligrams per liter
No	number
PCE	tetrachloroethylene
P.G.	Professional Geologist
SVE	soil vapor extraction
TCE	trichloroethylene
™	trademark
UST	underground storage tank
VOC	volatile organic compound

# 1. Introduction

GHD is submitting this *Second Semiannual 2018 Groundwater Monitoring Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for former Chevron-branded service station 97324. GHD performed groundwater monitoring and sampling in accordance with ADEC's August 2017 *Field Sampling Guidance* and GHD's 2015 Groundwater Monitoring and Sampling Work Plan. Reporting was performed by GHD in accordance with ADEC's March 7, 2017 *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites*.

The project objective is to monitor current groundwater conditions to evaluate petroleum hydrocarbon attenuation.

## 1.1 Site Description and Background

The site is located at 4417 Lake Otis Parkway in Anchorage, Alaska (Figure 1). The property's legal description is URBANEK KERKOVE LT 13A. The site latitude and longitude are 61.180288° north and 149.837470° west. The site is a former Chevron-branded service station currently owned by the Municipality of Anchorage (MOA) and is vacant, pending future redevelopment. Station facilities included three underground storage tanks (USTs) located south of the station building, two pump islands with three dispensers located west of the station building and a service bay located in the northern section of the station building (Figure 2). The station building, dispenser islands, USTs and product lines were removed in 2004.

Land use surrounding the site is primarily commercial and industrial. The adjacent properties to the north, west and south are listed as current or former ADEC contaminated sites.

Six groundwater monitoring wells are present onsite; four wells are monitored and sampled semiannually. An air sparge (AS)/soil vapor extraction (SVE) remediation system operated seasonally utilizing seven AS wells and four SVE wells; the system was shut down in August of 2017. Site photographs are presented in Appendix A.

## 1.2 Hydrogeology

The site is located in south central Alaska, between the northern Knik Arm and the southern Turnagain Arm of the Cook Inlet. Historical static groundwater depths have ranged between 8.58 to 24.79 feet below top of casing (ft btoc) according to groundwater data from 1992 to present. Static groundwater depths ranged from 15.44 (MW-9) to 24.53 ft btoc (MW-2R) on October 18, 2018. Groundwater flow was to the northwest with a gradient of 0.01 (Figure 2).

## 1.3 Conceptual Site Model

GHD completed a conceptual site model (CSM) for this site. Human health CSM scoping and graphics forms are included in Appendix B.

## 1.4 Constituents of Potential Concern - Cleanup Levels

Site constituents of potential concern (COPCs) are:

Table 1.1 Constituents of Potential Concern

COPCs	ADEC Cleanup Levels	
	Groundwater (mg/L)	Soil (mg/kg)
DRO	1.5	250
GRO	2.2	300
Benzene	0.0046	0.022

mg/L - milligrams per liter  
mg/kg - milligrams per kilogram  
DRO - diesel range organics  
GRO - gasoline range organics

ADEC Table C Groundwater Cleanup Levels (Title 18 Alaska Administrative Code (AAC) 75.345) and ADEC Method Two Soil Cleanup Levels, Tables B1 and B2, under 40-inch zone, migration to groundwater (Title 18 AAC 75.341) are the default site cleanup levels for groundwater and soil.

## 2. Groundwater Monitoring and Sampling

GHD gauged and sampled groundwater monitoring wells MW-1R, MW-2R, MW-8RR and MW-9 on October 18, 2018. Monitoring wells MW-1R, MW-2R, MW-8RR, and MW-9 were sampled with a bladder pump using a low-flow technique. The AS/SVE system was shut down on October 15, 2018 to allow groundwater levels to equilibrate prior to sampling.

### 2.1 Low-Flow Purging and Sampling

Each monitoring well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate. Depth to groundwater and total well depth was measured and recorded with a water level meter capable of 0.01 foot accuracy. A QED™ Sample Pro bladder pump with a self-contained compressor and control unit was used to purge groundwater from the well. Clean, disposable Teflon lined tubing and a bladder was used to purge the well and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Drawdown of the water table was continuously monitored during purging with a water level meter and the flow rate of the pump was adjusted so that drawdown was limited to 0.1 meter, or 0.3 feet. The intake of the pump was set as close as possible to the soil/groundwater interface and caution was exercised to ensure that the water table was within the screened interval of the well. Water quality parameters were continuously monitored during purging using a multi-parameter water quality meter equipped with a flow through cell and a turbidity meter. Water quality 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. A grab-groundwater sample was collected upon stabilization. Water quality parameters are considered stable when three successive readings are within the following ADEC limits:

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

## 2.2 Data Quality

All field instruments were calibrated prior to mobilization according to the manufacturer's specifications and calibration was checked and documented onsite on a daily basis. Calibration forms are included in Appendix C. All field staff are trained in routine operation and maintenance of instrumentation. All reusable sampling equipment was decontaminated using a stiff brush and a solution of water and laboratory grade detergent. Equipment was rinsed twice in clean water and once with distilled or deionized water.

Samples analyzed for VOCs were collected before samples for non-volatile compounds. Groundwater samples, including one duplicate per 10 samples collected, were decanted into clean containers supplied by the analytical laboratory, placed on ice in an insulated cooler, and chilled to a temperature of approximately  $4^\circ\text{C}$  ( $\pm 2^\circ\text{C}$ ). The coolers were sealed for transport and shipped to Eurofins Lancaster analytical laboratory under chain of custody. Laboratory data was qualified by a GHD chemist and an ADEC lab checklist was completed.

## 2.3 Purged Groundwater Disposal

Approximately 5.5 gallons of groundwater not used for sampling was filtered through granular activated carbon (GAC) and purged to the ground in the ADEC approved GAC discharge area to ensure no offsite runoff.

# 3. Results and Findings

## 3.1 Groundwater Analytical Methods

Collected groundwater samples were analyzed for one or more of the following:

- DRO by Alaska Series Method AK102
- GRO by Alaska Series Method AK101
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and halogenated volatile organic compounds (HVOCs) by method SW-846 8260B

## 3.2 Groundwater Sampling Results

No DRO, GRO, or benzene were detected above ADEC Table C Cleanup Levels in wells MW-1R, MW-2R, MW-8RR, or MW-9. Well MW-9 contained the highest concentration of tetrachloroethene



(0.082 milligrams per liter (mg/L)). Current groundwater analytical data are presented in Table 1. Historical groundwater analytical data are presented in Table 2. Current additional VOC analytical results are presented in Table 3. Historical additional VOC analytical results are presented in Table 4. The laboratory analytical report is included in Appendix D. Petroleum hydrocarbon concentration graphs are included in Appendix E.

Based on the quality assurance/quality control review, the data submitted were judged to be acceptable for use without qualification. The ADEC Laboratory Data Review Checklist and memorandum are presented in Appendix F.

## 4. Conclusions and Recommendations

A decreasing trend of petroleum hydrocarbon concentrations can be noted across the site and COPC concentrations are below ADEC Table C Groundwater Cleanup Levels.. GHD will continue to conduct semiannual groundwater monitoring and reporting in 2019.



## about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

**Oliver Yan**

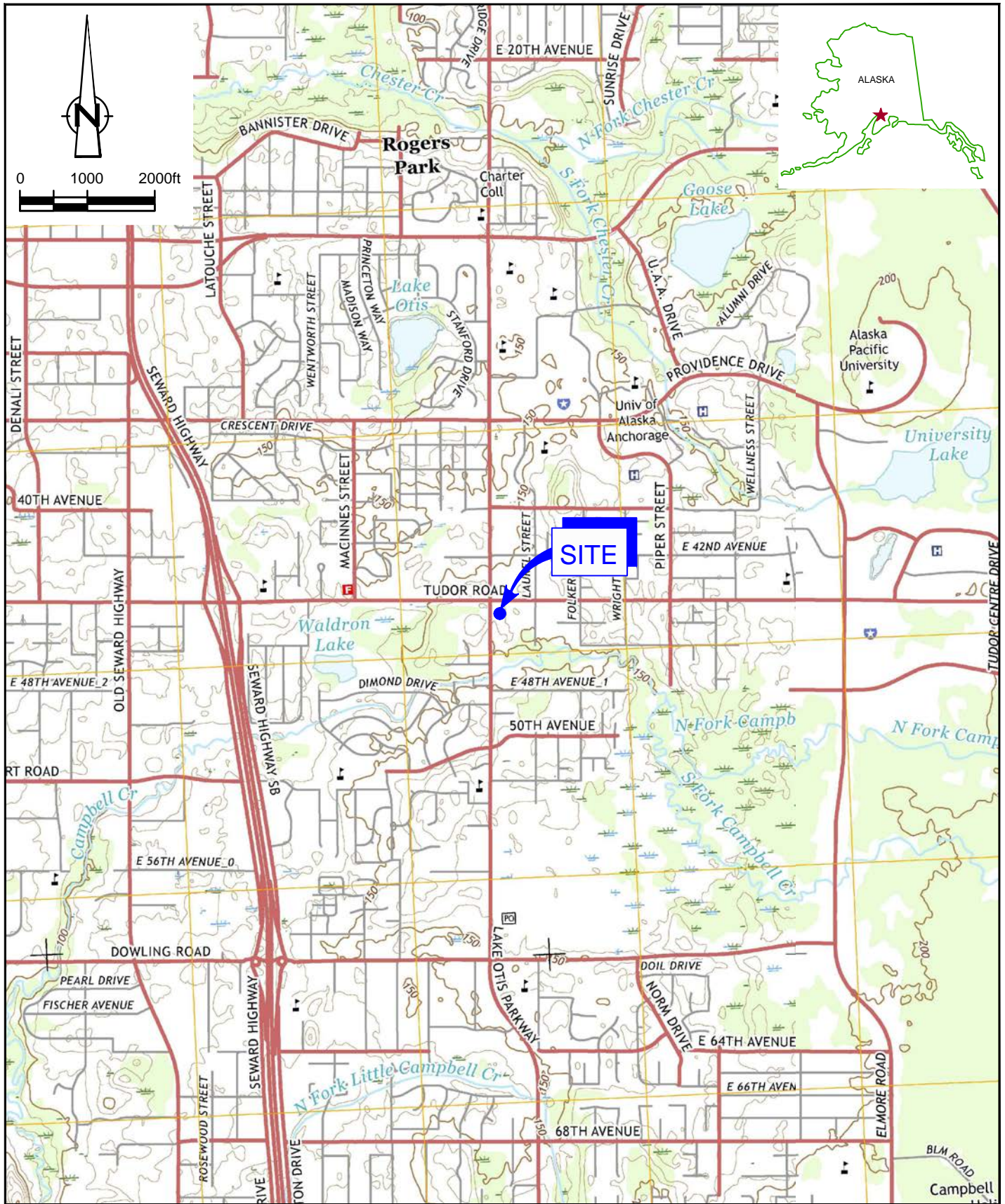
Oliver.Yan@ghd.com  
907-420-0700

**Siobhan Pritchard**

Siobhan.Pritchard@ghd.com  
720-974-0963

[www.ghd.com](http://www.ghd.com)

# Figures



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



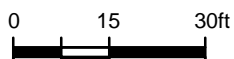
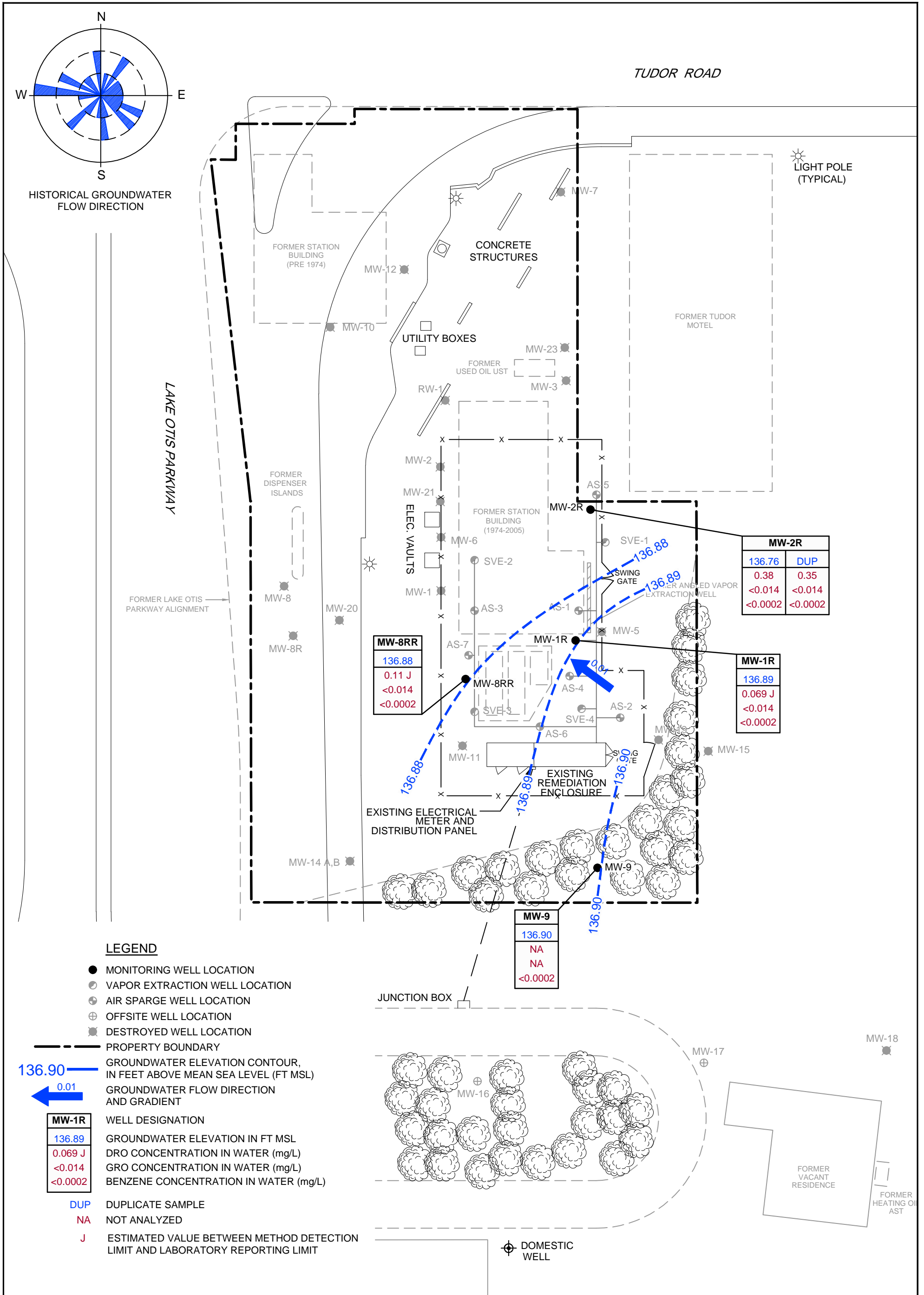
FORMER CHEVRON-BRANDED SERVICE STATION 97324  
 4417 LAKE OTIS PARKWAY  
 ANCHORAGE, ALASKA

612061-940418

Nov 29, 2018

VICINITY MAP

FIGURE 1



FORMER CHEVRON-BRANDED SERVICE STATION 97324  
4417 LAKE OTIS PARKWAY  
ANCHORAGE, ALASKA

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON  
CONCENTRATION MAP - OCTOBER 18, 2018

612061-940418  
Dec 5, 2018

FIGURE 2

# Tables

Table 1

**Current Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC ft msl	DTW ft btoc	GWE ft msl	HYDROCARBONS		PRIMARY VOCS			
					DRO mg/L	GRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>
MW-1R	10/18/2018	160.69	23.80	136.89	0.069 J	<0.014	<0.0002	<0.0002	<0.0002	<0.0005
MW-2R	10/18/2018	161.29	24.53	136.76	0.38 / 0.35	<0.014 / <0.014	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0005 / <0.0005
MW-8RR	10/18/2018	159.55	22.67	136.88	0.11 J	<0.014	<0.0002	<0.0002	0.0002 J	0.0009
MW-9	10/18/2018	152.34	15.44	136.90	-	-	<0.0002	<0.0002	<0.0002	<0.0005
Trip Blank	10/18/2018	-	-	-	-	<0.014	<0.0002	<0.0002	<0.0002	<0.0005

**Notes and Abbreviations**

TOC = top of casing

DTW = depth to water

GWE = groundwater elevation

TPH = total petroleum hydrocarbons

DRO = diesel range organics by Alaska Series Method AK102

GRO = gasoline range organics by Alaska Series Method AK101

Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B or SW-E46 8021B

Total Xylenes = Sum of m-, o-, and p-xylenes

VOC = volatile organic compounds by EPA Method 524.2

ADEC = Alaska Department of Environmental Conservation

<sup>a</sup> = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

ft msl = feet above mean sea level

ft btoc = feet below top of casing

mg/L = milligrams per liter

J = Estimated value

- = Not measured / not analyzed

&lt;x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-1	02/01/1992 **	--	--	--	--	--	0.25	0.2	5.1	0.14	--
MW-1	05/01/1992 **	99.13	23.38	75.75	--	--	0.19	0.18	0.4	0.13	--
MW-1	09/01/1992 **	99.13	23.56	75.57	--	--	0.23	0.2	3.3	0.1	--
MW-1	11/01/1992 **	99.13	23.55	75.58	--	--	0.23	0.27	0.3	0.11	--
MW-1	05/01/1993 **	99.13	23.87	75.26	--	--	2.0	33.0	4.4	15.0	--
MW-1	08/01/1993 **	99.13	23.84	75.29	--	--	17.0	40.0	4.5	16.0	--
MW-1	11/01/1993 **	99.13	23.83	75.30	--	--	2.4	6.6	8.4	31.0	--
MW-1	03/01/1994 **	99.13	23.68	75.45	--	--	10.0	35.0	4.2	14.0	--
MW-1	06/01/1994 **	99.13	23.60	75.53	--	--	11.0	47.0	4.8	17.0	--
MW-1	08/01/1994 **	99.13	24.09	75.04	--	--	11.0	34.0	4.7	18.0	--
MW-1	12/22/1994	99.13	23.83	75.30	--	--	13.0	31.0	3.6	11.0	--
MW-1	03/31/1995	99.13	23.72	75.41	--	--	11.0	22.0	4.2	12.0	--
MW-1	06/20/1995	99.13	23.39	75.74	--	--	7.9	20.0	3.1	9.4	--
MW-1	08/23/1995	99.13	23.67	75.46	--	--	8.4	22.0	3.2	11.0	--
MW-1	11/16/1995	99.13	23.68	75.45	--	--	7.2	17.0	3.0	9.3	--
MW-1	01/30/1996	99.13	23.92	75.21	--	--	10.0 / 11.0	26.0 / 26.0	3.9 / 3.8	12.0 / 11.0	--
MW-1	06/02/1996	99.13	23.62	75.51	--	--	8.91	24.4	3.59	12.8	--
MW-1	08/26/1996	99.13	24.06	75.07	--	--	8.75	29.3	3.49	14.0	--
MW-1	10/16/1996	99.13	24.59	74.54	--	--	9.34	30.2	4.02	15.1	--
MW-1	04/28/1997	99.13	23.96	75.17	--	--	8.2	21.9	3.98	16.9	--
MW-1	09/10/1997	99.13	23.31	75.82	--	--	4.43 / 4.38	18.7 / 17.6	2.84 / 2.82	11.2 / 10.8	--
MW-1	04/19/1998	99.13	22.90	76.23	--	--	3.86	17.3	3.44	12.9	--
MW-1	09/23/1998	99.13	23.19	75.94	--	--	2.92 / 3.06	9.96 / 10.5	2.29 / 2.46	7.0 / 7.49	--
MW-1	04/28/1999	99.13	23.68	75.45	--	--	1.22 / 1.24	4.86 / 4.86	1.96 / 1.96	5.96 / 5.89	<0.5 / <0.5
MW-1	05/05/2001	99.13	24.38	74.75	--	--	0.576	4.92	1.83	7.1	<0.5 / 0.005
MW-1	08/02/2001 *	99.13	23.81	75.32	0.123	71.3	3.41	8.37	3.32	8.79	--
MW-1	10/02/2001	99.13	24.12	75.01	--	--	0.19	17.6 / 18.5	3.92	17.3 / 17.5	51.9 / <0.005
MW-1	05/01/2002	161.02	24.14	136.88	--	--	0.355	5.66	4.24	20.4	42.8 / <0.005
MW-1	09/20/2002	161.02	24.00	137.02	--	--	0.231	2.28	1.4	5.09	<0.05 / <0.002
MW-1	05/20/2003 *	161.02	24.47	136.55	--	--	0.91	4.3	2.6	8.4	0.003



Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-1	10/02/2003	161.02	24.25	136.77	--	--	<b>0.56</b>	<b>4.7</b>	<b>2.3</b>	<b>8.2</b>	<0.005
MW-1	05/01/2004	DESTROYED - MAY 2004									
MW-1R	09/24/2006	160.69	23.20	137.49	<b>8.3</b>	<b>49.0</b>	<b>0.14</b>	0.46	<b>2.1</b>	<b>13.1</b>	--
MW-1R	05/14/2007	160.69	23.68	137.01	<b>4.0</b>	<b>42.0</b>	<b>0.5</b>	<b>1.4</b>	<b>2.3</b>	<b>8.6</b>	<0.001
MW-1R	09/21/2007	160.69	23.61	137.08	<b>4.9</b>	<b>30.0</b>	<b>0.2</b>	0.94	<b>1.5</b>	<b>6.4</b>	--
MW-1R	05/01/2008	160.69	23.77	136.92	<b>3.92</b>	<b>53.2</b>	<b>0.43</b>	<b>3.88</b>	<b>3.46</b>	<b>14.4</b>	--
MW-1R	07/15/2008	160.69	23.59	137.10	<b>5.50</b>	<b>65.0</b>	<b>0.32</b>	<b>5.20</b>	<b>2.40</b>	<b>11.90</b>	--
MW-1R	05/14/2009	160.69	23.69	137.00	<b>3.8 / 3.9</b>	<b>50 / 47</b>	<b>0.14 / 0.13</b>	<b>1.7 / 1.9</b>	<b>2.5 / 2.6</b>	<b>12.5 / 11.3</b>	--
MW-1R	08/26/2009	160.69	23.93	136.76	<b>4.9 J / 4.4 J</b>	<b>53 / 51</b>	<b>0.23 / 0.23</b>	<b>3.9 / 3.8</b>	<b>2.7 / 2.7</b>	<b>11.7/11.7</b>	--
MW-1R	06/15/2010	160.69	23.66	137.03	<b>4.6 J / 4.5 J</b>	<b>43 / 38</b>	<b>0.13 J / 0.083 J</b>	<b>1.9 J / 1.2 J</b>	<b>2.2 / 2.4</b>	<b>9.7 / 11.8</b>	--
MW-1R	09/05/2010	160.69	23.66	137.03	<b>5.6 / 5.4</b>	<b>48 / 47</b>	<b>0.070 / 0.068</b>	<b>1.2 / 1.1</b>	<b>2.7 / 2.1</b>	<b>12.3 / 10.3</b>	--
MW-1R	05/24/2011	160.69	24.08	136.61	<b>2.2</b>	<b>6.1</b>	<b>0.066</b>	0.005	<b>0.49</b>	<b>0.71</b>	--
MW-1R	11/10/2011	160.69	23.92	136.77	<b>2.4 / 2.6</b>	0.83 J / 0.80 J	<0.0005 / <0.0005	<0.0005 / <0.0005	0.004 J / 0.0005 J	0.012 J / 0.001 J	--
MW-1R	06/20/2012	160.69	23.35	137.34	<b>2.3 / 1.7</b>	0.070 J / 0.055 J	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0006 J / <0.0005	--
MW-1R	11/05/2012	160.69	22.70	137.99	0.31 J / 0.47 J	0.012 J / 0.019 J	<0.0005 / <0.0005	<0.0005 / 0.0005 J	<0.0005 / <0.0005	0.0018 J / 0.0016 J	--
MW-1R	04/30/2013	160.69	23.76	136.93	1.2 / 1.1	<b>5.1 / 3.7</b>	<b>0.0131 / 0.0115</b>	0.0022 / 0.0021	<b>0.686 / 0.668</b>	<b>0.361 / 0.336</b>	--
MW-1R <sup>HS</sup>	04/30/2013	160.69	23.76	136.93	0.93 / 1.4	<b>5.6 / 3.4</b>	<b>0.0112 / 0.0116</b>	0.0028 / 0.0018	<b>0.779 J / 0.36 J</b>	<b>0.459 / 0.281</b>	--
MW-1R	11/07/2013	160.69	23.02	137.67	-	-	-	-	-	-	--
MW-1R	11/08/2013	-	-	-	<b>2.6 / 2.6</b>	<b>7.9 / 8.7</b>	<b>0.021 / 0.018</b>	0.0043 J / 0.0065	<b>0.57 / 0.76</b>	<b>0.85 J / 1.5 J</b>	--
MW-1R	04/28/2014	160.69	23.47	137.22	<b>1.9 / 1.7</b>	<b>8.7 / 9.8</b>	<b>0.017 / 0.017</b>	0.0043 / 0.0039	<b>0.86 / 0.85</b>	<b>1.5 / 1.4</b>	--
MW-1R <sup>HS</sup>	04/28/2014	160.69	23.47	137.22	<b>1.7 / 1.9</b>	<b>5.2 J / 8.8 J</b>	<b>0.014 / 0.017</b>	0.0042 J / 0.0033	<b>0.72 / 0.98</b>	<b>1.3 / 2.0</b>	--
MW-1R	11/07/2014	160.69	23.88	136.81	<b>1.8/2.0</b>	<b>5.8/5.5</b>	<b>0.0076/0.0070</b>	0.0040 J/0.0043 J	<b>0.38/0.36</b>	<b>0.65/0.60</b>	--
MW-1R	04/29/2015	160.69	24.26	136.43	0.31	0.025 J	<0.0005	<0.0005	0.002	0.001	--
MW-1R	11/06/2015	160.69	23.42	137.27	0.42	<0.010	<0.001	<0.001	<0.001	<0.001	--
MW-1R	04/21/2016	160.69	24.11	136.58	0.66	0.039 J	0.003	<0.0005	<0.0005	<0.0005	--
MW-1R	11/01/2016	160.69	23.72	136.97	0.27 J	0.015 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-1R	05/01/2017	160.69	23.59	137.10	0.085 J	0.013 J	0.0006 J	<0.0005	<0.0005	<0.0005	--
MW-1R	10/17/2017	160.69	23.49	137.20	0.069 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-1R	04/27/2018	160.69	23.84	136.85	0.24 J	0.017 J	0.0007 J	<0.0005	<0.0005	<0.0005	<0.0005

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-1R	10/18/2018	160.69	23.80	136.89	0.069 J	<0.014	<0.0002	<0.0002	<0.0002	<0.0005	-
MW-2R	09/24/2006	161.29	23.76	137.53	<b>4.2</b>	<b>47.0</b>	<b>0.36</b>	<b>4.3</b>	<b>2.1</b>	<b>10.7</b>	--
MW-2R	05/14/2007	161.29	24.24	137.05	<b>2.8 / 4.90</b>	<b>28.0 / 28.0</b>	<b>0.19 / 0.18</b>	0.39 / 0.35	<b>1.5 / 1.5</b>	<b>6.8 / 6.5</b>	<0.001 / <0.001
MW-2R	09/21/2007	161.29	24.28	137.01	<b>4.0</b>	<b>24.0</b>	<b>0.08</b>	0.14	<b>0.88</b>	<b>5.7</b>	--
MW-2R	05/01/2008	161.29	24.38	136.91	<b>5.25 / 7.51</b>	<b>25.2 / 23.7</b>	<b>0.121 / 0.109</b>	<0.05 / 0.051	<b>1.99 / 1.92</b>	<b>6.2 / 6.6</b>	--
MW-2R	07/15/2008	161.29	24.23	137.06	<b>6.40 / 6.40</b>	<b>18.0 / 10.0</b>	<b>0.095 / 0.095</b>	0.069 / 0.079	<b>1.3 / 1.3</b>	<b>5.70 / 5.20</b>	--
MW-2R	05/14/2009	161.29	24.34	136.95	<b>5.0</b>	<b>26</b>	<b>0.059</b>	0.031	<b>1.3</b>	<b>4.7</b>	--
MW-2R	08/26/2009	161.29	24.61	136.68	<b>4.1 J</b>	<b>21</b>	<b>0.077</b>	0.049	<b>1.1</b>	<b>4.0</b>	--
MW-2R	06/15/2010	161.29	24.29	137.00	<b>5.4</b>	<b>8.8</b>	<b>0.026</b>	0.011	<b>0.32</b>	<b>1.46</b>	--
MW-2R	09/05/2010	161.29	24.32	136.97	<b>6.0</b>	<b>7.9</b>	<b>0.017</b>	0.008	<b>0.67</b>	<b>3.06</b>	--
MW-2R	05/24/2011	161.29	24.78	136.51	<b>4.8 / 4.8</b>	<b>13 / 13</b>	<b>0.031 / 0.029</b>	0.015 / 0.014	<b>0.76 / 0.76</b>	<b>2.6 / 2.6</b>	--
MW-2R	11/10/2011	161.29	24.63	136.66	0.85	0.071 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-2R	06/20/2012	161.29	24.06	137.23	1.2	0.030 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-2R	11/05/2012	161.29	23.38	137.91	-	-	-	-	-	-	--
MW-2R	11/08/2012	-	-	-	0.37	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-2R	04/30/2013	161.29	24.48	136.81	1.2	<b>2.3</b>	<b>0.0105</b>	0.0016	<b>0.0406</b>	<b>0.469</b>	--
MW-2R <sup>HS</sup>	04/30/2013	161.29	24.48	136.81	1.3	1.5	<b>0.0057</b>	0.00096 J	0.0015	<b>0.283</b>	--
MW-2R	11/07/2013	161.29	23.67	137.62	-	-	-	-	-	-	--
MW-2R	11/08/2013	-	-	-	<b>1.7</b>	0.49	0.00084 J	<0.00023	<0.00024	0.0047	--
MW-2R	04/28/2014	161.29	24.11	137.18	<b>1.7</b>	<b>4.5</b>	<b>0.012</b>	0.0021	<b>0.37</b>	<b>0.64</b>	--
MW-2R <sup>HS</sup>	04/28/2014	161.29	24.11	137.18	0.88	0.39	0.0018	0.00020 J	<b>0.030</b>	0.037	--
MW-2R	11/07/2014	161.29	24.55	136.74	<b>1.7</b>	<b>5.1</b>	<b>0.0068</b>	<0.0017 J	<b>0.25</b>	<b>0.37</b>	--
MW-2R	04/29/2015	161.29	24.85	136.44	0.34 / 0.40	0.011 J / 0.013 J	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	--
MW-2R	11/06/2015	161.29	24.12	137.17	0.99 J / 0.63 J	<0.010 / <0.010	<0.001 / <0.003	<0.001 / <0.003	<0.001 / <0.003	<0.001 / <0.003	--
MW-2R	04/21/2016	161.29	24.79	136.50	<b>2.7 / 2.6</b>	<b>2.2 / 2.2</b>	<b>0.01 / 0.009 J</b>	0.0009 J / <0.005	<b>0.15 / 0.12</b>	<b>0.231 / 0.18</b>	--
MW-2R	11/01/2016	161.29	24.45	136.84	<b>2.5 J / 2.3 J</b>	<b>2.8 J / 2.9 J</b>	<b>0.010 / 0.010</b>	0.001 J / 0.001 J	<b>0.14 / 0.14</b>	<b>0.272 / 0.272</b>	--
MW-2R	05/01/2017	161.29	24.30	136.99	0.87 / 0.84	0.82 / 0.82	<b>0.006 / 0.006</b>	<0.0005 / <0.0005	<b>0.078 / 0.084</b>	0.046 / 0.054	--
MW-2R	10/17/2017	161.29	24.18	137.11	1.5 J / 1.5 J	2.0 / 2.1	<b>0.009 / 0.01</b>	<0.0005 / <0.0005	<b>0.16 / 0.16</b>	0.153 / 0.153	--
MW-2R	04/27/2018	161.29	24.55	136.74	1.4 / 1.3	1.4 / 1.4	<b>0.007 / 0.006</b>	0.0006 J / 0.0005 J	<b>0.14 / 0.13</b>	0.12 / 0.11	<0.0005 / <0.0005

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-2R	10/18/2018	161.29	24.53	136.76	0.38 / 0.35	<0.014 / <0.014	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0005 / <0.0005	-
MW-3	02/01/1992 **	--	--	--	--	--	<b>0.006</b>	ND	ND	ND	--
MW-3	05/01/1992 **	98.64	22.87	75.77	--	--	<b>0.006</b>	ND	ND	ND	--
MW-3	09/01/1992 **	98.64	23.12	75.52	--	--	<b>0.21</b>	ND	ND	ND	--
MW-3	11/01/1992 **	98.64	23.10	75.54	--	--	<b>0.012</b>	ND	ND	ND	--
MW-3	05/01/1993 **	98.64	23.45	75.19	--	--	ND	ND	ND	ND	--
MW-3	08/01/1993 **	98.64	23.35	75.29	--	--	ND	ND	ND	ND	--
MW-3	11/01/1993 **	98.64	23.21	75.43	--	--	ND	0.042	ND	ND	--
MW-3	03/01/1994 **	98.64	23.16	75.48	--	--	ND	ND	ND	0.005	--
MW-3	06/01/1994 **	98.64	23.49	75.15	--	--	ND	ND	ND	ND	--
MW-3	08/01/1994 **	98.64	23.65	74.99	--	--	ND	ND	ND	ND	--
MW-3	12/22/1994	98.64	23.42	75.22	--	--	ND	ND	ND	ND	--
MW-3	04/10/1995	98.64	--	--	--	--	ND	ND	ND	ND	--
MW-3	06/20/1995	98.64	22.95	75.69	--	--	ND	ND	ND	ND	--
MW-3	06/21/1995	98.64	--	--	--	--	--	--	--	--	--
MW-3	08/23/1995	98.64	23.19	75.45	--	--	ND	ND	ND	ND	--
MW-3	11/16/1995	98.64	23.23	75.41	--	--	ND	ND	ND	ND	--
MW-3	01/30/1996	98.64	23.48	75.16	--	--	ND	ND	ND	ND	--
MW-3	06/02/1996	98.64	23.22	75.42	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-3	08/26/1996	98.64	23.56	75.08	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-3	10/16/1996	98.64	24.05	74.59	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-3	04/28/1997	98.64	23.73	74.91	--	--	<0.0005	0.00111	<0.0005	0.00169	--
MW-3	09/10/1997	98.64	22.96	75.68	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-3	04/19/1998	98.64	23.55	75.09	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-3	09/23/1998	98.64	22.90	75.74	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-3	04/28/1999	98.64	23.24	75.40	--	--	0.00089	<0.0005	<0.0005	<0.0005	<0.01
MW-3	10/13/1999	98.64	23.22	75.42	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-3	05/19/2000	98.64	23.60	75.04	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-3	09/27/2000	98.64	23.52	75.12	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-3	05/05/2001	98.64	23.88	74.76	--	--	0.000656	<0.0005	<0.0005	<0.001	<0.005
MW-3	08/02/2001 *	98.64	23.36	75.28	0.00136	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-3	10/02/2001	98.64	23.72	74.92	--	--	0.0011 / 0.000854	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.001
MW-3	05/01/2002	160.51	23.72	136.79	--	--	<b>0.099 / 0.286</b>	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.001
MW-3	09/20/2003	160.51	23.55	136.96	--	--	0.000709	<0.0005	<0.0005	<0.001	<0.001
MW-3	05/20/2003 *	160.51	24.02	136.49	--	--	0.0006 / 0.0006	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002
MW-3	10/02/2003	160.51	23.84	136.67	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
MW-3	05/01/2004	DESTROYED - MAY 2004									
MW-4	02/01/1992 **	--	--	--	--	--	<b>0.032</b>	ND	ND	ND	--
MW-4	05/01/1992 **	98.45	21.72	76.73	--	--	--	--	--	--	--
MW-4	09/01/1992 **	98.45	22.89	75.56	--	--	<b>0.005</b>	ND	ND	ND	--
MW-4	11/01/1992 **	98.45	22.85	75.60	--	--	--	--	--	--	--
MW-4	05/01/1993 **	98.45	23.18	75.27	--	--	ND	ND	ND	ND	--
MW-4	08/01/1993 **	98.45	23.17	75.28	--	--	ND	ND	ND	ND	--
MW-4	11/01/1993 **	98.45	23.02	75.43	--	--	ND	ND	ND	ND	--
MW-4	03/01/1994 **	98.45	--	--	--	--	ND	ND	ND	ND	--
MW-4	06/01/1994 **	98.45	23.24	75.21	--	--	ND	ND	ND	ND	--
MW-4	08/01/1994 **	98.45	23.43	75.02	--	--	ND	ND	ND	ND	--
MW-4	12/22/1994	98.45	--	--	--	--	--	--	--	--	--
MW-4	03/31/1995	98.45	--	--	--	--	--	--	--	--	--
MW-4	06/20/1995	98.45	22.70	75.75	--	--	ND	ND	ND	ND	--
MW-4	08/23/1995	98.45	22.99	75.46	--	--	ND	ND	ND	ND	--
MW-4	11/16/1995	98.45	23.02	75.43	--	--	ND	ND	ND	ND	--
MW-4	01/30/1996	98.45	23.25	75.20	--	--	ND	ND	ND	ND	--
MW-4	06/02/1996	98.45	22.97	75.48	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-4	08/26/1996	98.45	23.37	75.08	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-4	04/28/1997	98.45	23.52	74.93	--	--	<0.0005	0.00166	<0.0005	0.00159	--
MW-4	09/10/1997	98.45	22.74	75.71	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-4	04/19/1998	98.45	23.30	75.15	--	--	<0.0005	<0.0005	<0.0005	<0.001	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-4	09/23/1998	98.45	22.68	75.77	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-4	05/02/1999	98.45	23.10	75.35	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<b>0.626 / &lt;0.005</b>
MW-4	10/13/1999	98.45	23.02	75.43	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-4	05/19/2000	98.45	23.39	75.06	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-4	09/27/2000	98.45	23.32	75.13	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-4	05/05/2001	98.45	23.71	74.74	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-4	08/02/2001 *	98.45	23.14	75.31	0.00106	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-4	10/02/2001	98.45	23.54	74.91	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-4	05/01/2002	160.30	--	--	--	--	--	--	--	--	--
MW-4	09/20/2002	160.30	23.39	136.91	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-4	05/20/2003 *	160.30	23.80	136.50	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
MW-4	10/02/2003	160.30	23.59	136.71	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
MW-4	05/01/2004	DESTROYED - MAY 2004									
MW-5	02/01/1992 **	--	--	--	--	--	<b>7.2</b>	<b>4.8</b>	<b>2.0</b>	<b>2.9</b>	--
MW-5	05/01/1992 **	99.13	22.50	76.63	--	--	<b>2.5</b>	0.14	<b>0.05</b>	<b>1.8</b>	--
MW-5	09/01/1992 **	99.13	23.57	75.56	--	--	<b>5.9</b>	<b>6.5</b>	<b>2.4</b>	<b>5.3</b>	--
MW-5	11/01/1992 **	99.13	22.53	76.60	--	--	<b>1.3</b>	0.59	<b>0.48</b>	<b>1.7</b>	--
MW-5	05/01/1993 **	99.13	23.86	75.27	--	--	<b>0.066</b>	ND	<b>0.032</b>	0.005	--
MW-5	08/01/1993 **	99.13	23.85	75.28	--	--	<b>0.058</b>	ND	0.005	ND	--
MW-5	11/01/1993 **	99.13	23.70	75.43	--	--	<b>0.006</b>	ND	ND	ND	--
MW-5	03/01/1994 **	99.13	--	--	--	--	ND	ND	ND	ND	--
MW-5	06/01/1994 **	99.13	23.89	75.24	--	--	ND	ND	ND	ND	--
MW-5	08/01/1994 **	99.13	24.14	74.99	--	--	ND	ND	ND	ND	--
MW-5	12/22/1994	99.13	--	--	--	--	--	--	--	--	--
MW-5	03/31/1995	99.13	--	--	--	--	--	--	--	--	--
MW-5	06/20/1995	99.13	23.40	75.73	--	--	ND	ND	ND	ND	--
MW-5	08/23/1995	99.13	23.70	75.43	--	--	ND	ND	ND	ND	--
MW-5	11/16/1995	99.13	23.71	75.42	--	--	ND	ND	ND	ND	--
MW-5	01/30/1996	99.13	23.95	75.18	--	--	ND	ND	ND	ND	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-5	06/02/1996	99.13	23.63	75.50	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	08/26/1996	99.13	24.19	74.94	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	10/16/1996	99.13	24.66	74.47	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	04/28/1997	99.13	24.24	74.89	--	--	0.000617	0.000756	<0.0005	<0.001	--
MW-5	09/10/1997	99.13	23.43	75.70	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	04/19/1998	99.13	24.00	75.13	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	09/23/1998	99.13	23.20	75.93	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-5	04/28/1999	99.13	23.67	75.46	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
MW-5	10/13/1999	99.13	23.72	75.41	--	--	<0.0005	0.00139	<0.0005	<0.0005	<0.005
MW-5	05/19/2000	99.13	24.08	75.05	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-5	09/27/2000	99.13	23.95	75.18	--	--	--	--	--	--	--
MW-5	05/05/2001	99.13	--	--	--	--	--	--	--	--	--
MW-5	08/02/2001 *	99.13	23.84	75.29	--	--	--	--	--	--	--
MW-5	10/02/2001	99.13	--	--	--	--	--	--	--	--	--
MW-5	05/01/2002	161.01	24.10	136.91	--	--	--	--	--	--	--
MW-5	09/20/2002	161.01	24.09	136.92	--	--	--	--	--	--	--
MW-5	05/20/2003 *	161.01	--	--	--	--	--	--	--	--	--
MW-5	10/02/2003	161.01	24.23	136.78	--	--	--	--	--	--	--
MW-5	05/01/2004	DESTROYED - MAY 2004									
MW-6	02/01/1992 **	--	--	--	--	--	ND	ND	ND	ND	--
MW-6	05/01/1992 **	--	--	--	--	--	ND	ND	ND	ND	--
MW-6	09/01/1992 **	--	--	75.22	--	--	--	--	--	--	--
MW-6	08/01/1993 **	--	--	-	--	--	ND	ND	ND	ND	--
MW-6	11/01/1993 **	--	--	75.29	--	--	--	--	--	--	--
MW-6	08/02/2001 *		23.98	--	0.00025	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-6	09/21/2001	161.14	--	--	--	--	--	--	--	--	--
MW-6	05/01/2004	DESTROYED - MAY 2004									
MW-7	02/01/1992 **	97.82	--	--	--	--	<b>0.047</b>	ND	ND	ND	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-7	05/01/1992 **	97.82	22.06	75.76	--	--	ND	ND	ND	0.006	--
MW-7	09/01/1992 **	97.82	22.36	75.46	--	--	ND	ND	ND	ND	--
MW-7	11/01/1992 **	97.82	22.41	75.41	--	--	ND	ND	ND	ND	--
MW-7	05/01/1993 **	97.82	22.75	75.07	--	--	ND	ND	ND	ND	--
MW-7	08/01/1993 **	97.82	22.64	75.18	--	--	ND	ND	ND	ND	--
MW-7	11/01/1993 **	97.82	22.49	75.33	--	--	ND	ND	ND	ND	--
MW-7	03/01/1994 **	97.82	22.43	75.39	--	--	ND	0.011	ND	0.093	--
MW-7	06/01/1994 **	97.82	22.79	75.03	--	--	ND	ND	ND	ND	--
MW-7	08/01/1994 **	97.82	22.88	74.94	--	--	ND	ND	ND	ND	--
MW-7	12/22/1994	97.82	22.72	75.10	--	--	ND	ND	ND	0.0026	--
MW-7	03/31/1995	97.82	--	--	--	--	--	--	--	--	--
MW-7	06/20/1995	97.82	22.27	75.55	--	--	ND	ND	ND	ND	--
MW-7	08/23/1995	97.82	22.46	75.36	--	--	0.00073	ND	ND	0.00073	--
MW-7	11/16/1995	97.82	22.60	75.22	--	--	0.00051	ND	ND	0.0024	--
MW-7	01/30/1996	97.82	22.75	75.07	--	--	ND	ND	ND	0.0017	--
MW-7	06/02/1996	97.82	--	--	--	--	--	--	--	--	--
MW-7	08/26/1996	97.82	22.78	75.04	--	--	<0.0005	<0.0005	0.00059	0.0083	--
MW-7	10/16/1996	97.82	23.44	74.38	--	--	<0.0005	<0.0005	0.001	0.0063	--
MW-7	04/28/1997	97.82	23.08	74.74	--	--	--	--	--	--	--
MW-7	09/10/1997	97.82	22.36	75.46	--	--	0.0017	<0.0005	<0.0005	0.00294	--
MW-7	04/19/1998	97.82	22.90	74.92	--	--	<0.0005	<0.0005	<0.005	<0.002	--
MW-7	09/23/1998	97.82	22.12	75.70	--	--	0.000731	<0.0005	0.00568	<0.0015	--
MW-7	04/28/1999	97.82	22.71	75.11	--	--	0.00091	0.00078	0.00197	0.00104	<0.01
MW-7	10/13/1999	97.82	22.64	75.18	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-7	05/19/2000	97.82	22.99	74.83	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-7	09/27/2000	97.82	22.98	74.84	--	--	<0.0005	<0.0005	0.00619	<0.002	<0.005
MW-7	05/05/2001	97.82	23.29	74.53	--	--	<0.0005	<0.0005	0.0006	<0.001	<0.005
MW-7	08/02/2001 *	97.82	22.75	75.07	0.00211	0.0654	<0.001	<0.001	<0.001	<0.003	--
MW-7	10/02/2001	97.82	23.14	74.68	--	--	<0.0005	<0.0005	0.00109	<0.001	<0.001
MW-7	05/01/2002	159.86	23.09	136.77	--	--	<0.0005	<0.0005	<0.0005	0.00127	<0.001

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-7	09/20/2002	159.86	22.95	136.91	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / 0.002
MW-7	05/20/2003 *	159.86	23.44	136.42	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
MW-7	10/02/2003	159.86	23.30	136.56	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-7	05/01/2004		DESTROYED - MAY 2004								
MW-8	02/01/1992 **	--	--	--	--	--	<b>0.16</b>	0.28	<b>3.4</b>	0.12	--
MW-8	05/01/1992 **	98.09	22.24	75.85	--	--	<b>0.11</b>	0.2	<b>2.3</b>	<b>9.9</b>	--
MW-8	09/01/1992 **	98.09	22.43	75.66	--	--	<b>0.13</b>	0.26	<b>2.6</b>	0.11	--
MW-8	11/01/1992 **	98.09	22.50	75.59	--	--	<b>0.9</b>	0.17	<b>1.3</b>	<b>7.5</b>	--
MW-8	05/01/1993 **	98.09	22.84	75.25	--	--	<b>9.3</b>	<b>23.0</b>	<b>1.8</b>	<b>8.5</b>	--
MW-8	08/01/1993 **	98.09	22.80	75.29	--	--	<b>11.0</b>	<b>25.0</b>	<b>1.7</b>	<b>12.0</b>	--
MW-8	11/01/1993 **	98.09	22.54	75.55	--	--	<b>9.7</b>	<b>26.0</b>	<b>2.0</b>	<b>14.0</b>	--
MW-8	03/01/1994 **	98.09	22.43	75.66	--	--	<b>6.4</b>	<b>25.0</b>	<b>1.8</b>	<b>13.0</b>	--
MW-8	06/01/1994 **	98.09	22.43	75.66	--	--	<b>10.0</b>	<b>33.0</b>	<b>2.9</b>	<b>22.0</b>	--
MW-8	08/01/1994 **	98.09	22.92	75.17	--	--	<b>8.4</b>	<b>39.0</b>	<b>2.7</b>	<b>19.0</b>	--
MW-8	12/22/1994	98.09	22.74	75.35	--	--	<b>3.9</b>	<b>13.0</b>	<b>0.8</b>	<b>12.0</b>	--
MW-8	03/31/1995	98.09	22.76	75.33	--	--	<b>4.8</b>	<b>13.0</b>	<b>1.4</b>	<b>9.6</b>	--
MW-8	06/20/1995	98.09	22.32	75.77	--	--	<b>4.1</b>	<b>20.0</b>	<b>1.3</b>	<b>15.0</b>	--
MW-8	08/23/1995	98.09	22.51	75.58	--	--	<b>3.6</b>	<b>21.0</b>	<b>1.9</b>	<b>20.0</b>	--
MW-8	11/16/1995	98.09	22.59	75.50	--	--	<b>3.2</b>	<b>18.0</b>	<b>1.7</b>	<b>16.0</b>	--
MW-8	01/30/1996	98.09	22.71	75.38	--	--	<b>3.4</b>	<b>23.0</b>	<b>2.0</b>	<b>20.0</b>	--
MW-8	06/02/1996	98.09	22.57	75.52	--	--	<b>3.4</b>	<b>15.9</b>	<b>1.47</b>	<b>12.7</b>	--
MW-8	08/26/1996	98.09	22.75	75.34	--	--	<b>2.43 / 2.86</b>	<b>16.8 / 18.8</b>	<b>1.44 / 1.63</b>	<b>18.4 / 20.5</b>	--
MW-8	10/16/1996	98.09	23.42	74.67	--	--	<b>6.79</b>	<b>24.3</b>	<b>2.04</b>	<b>15.1</b>	--
MW-8	04/28/1997	98.09	23.14	74.95	--	--	<b>4.27 / 4.54</b>	<b>9.78 / 13.9</b>	<b>1.29 / 1.37</b>	<b>8.56 / 9.29</b>	--
MW-8	09/10/1997	98.09	22.43	75.66	--	--	<b>2.35</b>	<b>6.52</b>	<b>0.814</b>	<b>7.48</b>	--
MW-8	04/19/1998	98.09	22.93	75.16	--	--	<b>1.14</b>	<b>6.79</b>	<b>0.571</b>	<b>12.9</b>	--
MW-8	09/23/1998	98.09	22.36	75.73	--	--	<b>0.683</b>	<b>4.2</b>	<b>0.539</b>	<b>9.23</b>	--
MW-8	09/21/2001	159.68	--	--	--	--	--	--	--	--	--



Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-8R	09/24/2006	159.71	22.06	137.65	2.3	22.0	0.075	1.8	0.72	4.1	--
MW-8R	05/14/2007	159.71	22.57	137.14	4.1	49.0	0.16	4.5	2.1	10.0	<0.001
MW-8R	09/21/2007	159.71	22.60	137.11	4.9	57.0	0.12	7.4	1.8	11.0	--
MW-8R	05/01/2008	159.71	22.79	136.92	3.67	55.6	0.128	3.59	3.0	14.9	--
MW-8R	07/15/2008	159.71	22.49	137.22	5.30	18.0	0.060	4.6	2.1	12.50	--
MW-8R	05/14/2009	159.71	22.71	137.00	4.1	51	0.079	3.9	2.4	12.0	--
MW-8R	08/26/2009	159.71	22.90	136.81	3.3 J	49	0.072	2.9	2.0	11.4	--
MW-8R	04/20/2010	159.71	22.89	136.82	6.7 / 6.4	40 J / 18 J	0.017 J / 0.017 J	0.50 / 0.51	1.1 / 1.2	6.3 / 6.7	--
MW-8RR	07/26/2011	159.55	22.84	136.71	6.7	17	0.15	2.1	0.49	3.4	--
MW-8RR	11/10/2011	159.55	22.80	136.75	0.78	0.030 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	06/20/2012	159.55	22.21	137.34	0.56	0.019 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	11/05/2012	159.55	21.57	137.98	--	--	--	--	--	--	--
MW-8RR	11/08/2012	159.55	--	--	0.22 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	04/30/2013	159.55	22.61	136.94	<0.56	0.048 J	0.0017	0.0029	0.0016	0.0117	--
MW-8RR <sup>HS</sup>	04/30/2013	159.55	22.61	136.94	0.66	<0.10	0.000078 J	0.000084 J	<0.000081	<0.00022	--
MW-8RR	11/07/2013	159.55	21.90	137.65	-	-	-	-	-	-	--
MW-8RR	11/08/2013	159.55	--	--	0.75	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--
MW-8RR	04/28/2014	159.55	22.32	137.23	0.12 J	<0.050	<0.00015	<0.00011	0.00035 J	<0.00040	--
MW-8RR <sup>HS</sup>	04/28/2014	159.55	22.32	137.23	0.37	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--
MW-8RR	11/07/2014	159.55	22.73	136.82	0.33 J	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--
MW-8RR	04/29/2015	159.55	23.03	136.52	0.22 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	11/06/2015	159.55	22.32	137.23	0.13 J	<0.010	<0.001	<0.001	<0.001	<0.001	--
MW-8RR	04/21/2016	159.55	22.96	136.59	0.31	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	11/01/2016	159.55	22.60	136.95	0.37 J	0.013 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	05/01/2017	159.55	22.46	137.09	0.60	0.014 J	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	10/17/2017	159.55	23.35	136.20	0.24 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-8RR	04/27/2018	159.55	22.72	136.83	0.12 J	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-8RR	10/18/2018	159.55	22.67	136.88	0.11 J	<0.014	<0.0002	<0.0002	0.0002 J	0.0009	-

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-9	02/01/1992 **	--	--	--	--	--	<b>0.03</b>	0.059	<b>0.074</b>	0.027	--
MW-9	05/01/1992 **	90.30	14.57	75.73	--	--	ND	0.003	0.013	0.002	--
MW-9	09/01/1992 **	90.30	14.74	75.56	--	--	ND	ND	ND	ND	--
MW-9	11/01/1992 **	90.30	14.66	75.64	--	--	0.003	ND	ND	ND	--
MW-9	05/01/1993 **	90.30	15.11	75.19	--	--	ND	ND	ND	ND	--
MW-9	08/01/1993 **	90.30	15.12	75.18	--	--	ND	ND	ND	ND	--
MW-9	11/01/1993 **	90.30	14.96	75.34	--	--	ND	0.011	ND	ND	--
MW-9	03/01/1994 **	90.30	14.99	75.31	--	--	ND	ND	ND	ND	--
MW-9	06/01/1994 **	90.30	15.23	75.07	--	--	ND	ND	ND	ND	--
MW-9	08/01/1994 **	90.30	15.48	74.82	--	--	ND	ND	ND	ND	--
MW-9	12/22/1994	90.30	15.13	75.17	--	--	ND	ND	ND	ND	--
MW-9	03/31/1995	90.30	14.98	75.32	--	--	ND	ND	ND	ND	--
MW-9	06/20/1995	90.30	14.68	75.62	--	--	ND	ND	ND	ND	--
MW-9	08/23/1995	90.30	15.02	75.28	--	--	ND	0.00067	ND	0.0022	--
MW-9	11/16/1995	90.30	15.00	75.30	--	--	ND	ND	ND	ND	--
MW-9	01/30/1996	90.30	15.22	75.08	--	--	ND	ND	ND	ND	--
MW-9	06/02/1996	90.30	14.93	75.37	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	08/26/1996	90.30	15.50	74.80	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	10/16/1996	90.30	15.81	74.49	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	04/28/1997	90.30	15.50	74.80	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	09/10/1997	90.30	14.76	75.54	--	--	<0.001	<0.001	<0.001	<0.001	--
MW-9	04/19/1998	90.30	15.35	74.95	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	09/23/1998	90.30	14.39	75.91	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	04/28/1999	90.30	14.98	75.32	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
MW-9	10/13/1999	90.30	15.02	75.28	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-9	05/19/2000	90.30	15.40	74.90	--	--	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.002 / <0.002	<0.002 / <0.002
MW-9	09/27/2000	90.30	15.24	75.06	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-9	05/05/2001	90.30	15.69	74.61	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-9	08/02/2001 *	90.30	15.16	75.14	<0.001	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-9	10/02/2001	90.30	--	--	--	--	--	--	--	--	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-9	05/01/2002	152.33	15.38	136.95	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-9	09/20/2002	152.33	15.32	137.01	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / 0.002
MW-9	05/20/2003 *	152.33	15.77	136.56	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
MW-9	10/02/2003	152.33	15.54	136.79	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-9	06/01/2004	152.33	15.11	137.22	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002
MW-9	09/21/2004 *	152.33	15.58	136.75	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.002 / <0.002
MW-9	05/12/2005	152.33	15.26	137.07	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	<0.0025 / <0.0025
MW-9	09/19/2005	152.33	14.80	137.53	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.0025 / <0.0025
MW-9	05/08/2006	152.33	15.74	136.59	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	09/24/2006	152.34	14.88	137.46	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-9	05/14/2007	152.34	15.31	137.03	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.0005
MW-9	09/21/2007	152.34	15.23	137.11	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-9	05/01/2008	152.34	15.37	136.97	--	--	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-9	07/15/2008	152.34	15.27	137.07	--	--	<0.0005	<0.0005	<0.0005	<0.0001	--
MW-9	05/14/2009	152.34	16.37	135.97	--	0.12	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	08/26/2009	152.34	15.61	136.73	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-9	04/20/2010	152.34	15.60	136.74	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	09/05/2010	152.34	15.35	136.99	--	--	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-9	05/24/2011	152.34	15.74	136.60	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	11/10/2011	152.34	15.60	136.74	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	06/20/2012	152.34	15.02	137.32	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	11/05/2012	152.34	14.41	137.93	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	04/30/2013	152.34	15.37	136.97	--	--	<0.000062	<0.000077	<0.000081	<0.00022	--
MW-9 <sup>HS</sup>	04/30/2013	152.34	15.37	136.97	--	--	<0.000062	<0.000077	<0.000081	<0.00022	--
MW-9	11/07/2013	152.34	14.75	137.59	--	--	--	--	--	--	--
MW-9	11/08/2013	--	--	--	--	--	<0.00024	<0.00023	<0.00024	<0.00072	--
MW-9	04/28/2014	152.34	15.17	137.17	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--
MW-9 <sup>HS</sup>	04/28/2014	152.34	15.17	137.17	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--
MW-9	11/07/2014	152.34	15.56	136.78	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--
MW-9	04/29/2015	152.34	15.84	136.50	-	-	<0.0005	<0.0005	<0.0005	<0.0005	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-9	11/06/2015	152.34	15.16	137.18	--	--	<0.001	<0.001	<0.001	<0.001	--
MW-9	04/21/2016	152.34	15.79	136.55	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	11/01/2016	152.34	15.43	136.91	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	05/01/2017	152.34	15.27	137.07	--	--	<0.003	<0.003	<0.003	<0.003	--
MW-9	10/17/2017	152.34	15.15	137.19	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
MW-9	04/27/2018	152.34	15.52	136.82	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	10/18/2018	152.34	15.44	136.90	--	--	<0.0002	<0.0002	<0.0002	<0.0005	-
MW-10	02/01/1992 **	--	--	--	--	--	ND	ND	ND	ND	--
MW-10	09/01/1992 **	--	--	79.61	--	--	ND	ND	ND	ND	--
MW-10	08/01/1993 **	--	--	79.29	--	--	ND	ND	ND	ND	--
MW-10	08/02/2001 *	--	20.64	--	0.00282	<0.05	0.00116	<0.001	<0.001	<0.003	--
MW-10	09/21/2001	160.90	--	--	--	--	--	--	--	--	--
MW-10	05/01/2004	DESTROYED - MAY 2004									
MW-11	02/01/1992 **	98.38	--	--	--	--	<b>0.08</b>	ND	<b>0.02</b>	0.01	--
MW-11	05/01/1992 **	98.38	22.65	75.73	--	--	<b>1.6</b>	<b>8.7</b>	<b>1.2</b>	<b>0.20</b>	--
MW-11	09/01/1992 **	98.38	22.76	75.62	--	--	<b>0.36</b>	--	<b>0.03</b>	0.061	--
MW-11	11/01/1992 **	98.38	22.73	75.65	--	--	<b>1.2</b>	0.074	<b>0.02</b>	0.004	--
MW-11	05/01/1993 **	98.38	23.06	75.32	--	--	<b>0.03</b>	ND	ND	ND	--
MW-11	08/01/1993 **	98.38	23.05	75.33	--	--	<b>0.042</b>	ND	ND	ND	--
MW-11	11/01/1993 **	98.38	22.87	75.51	--	--	<b>0.11</b>	ND	<b>0.11</b>	0.1	--
MW-11	03/01/1994 **	98.38	22.82	75.56	--	--	ND	ND	ND	ND	--
MW-11	06/01/1994 **	98.38	23.09	75.29	--	--	<b>0.012</b>	ND	0.011	0.019	--
MW-11	08/01/1994 **	98.38	23.32	75.06	--	--	ND	ND	ND	ND	--
MW-11	12/22/1994	98.38	23.02	75.36	--	--	ND	ND	ND	ND	--
MW-11	03/31/1995	98.38	22.91	75.47	--	--	ND	ND	ND	ND	--
MW-11	06/20/1995	98.38	22.57	75.81	--	--	0.00072	ND	ND	ND	--
MW-11	08/23/1995	98.38	22.89	75.49	--	--	0.0013	ND	ND	ND	--
MW-11	11/16/1995	98.38	22.88	75.50	--	--	0.0016	ND	ND	ND	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-11	01/30/1996	98.38	23.14	75.24	--	--	0.00068	ND	ND	ND	--
MW-11	06/02/1996	98.38	22.82	75.56	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / 0.00063	<0.001 / <0.001	--
MW-11	08/26/1996	98.38	23.31	75.07	--	--	0.0016	<0.0005	<0.0005	<0.001	--
MW-11	10/16/1996	98.38	23.69	74.69	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-11	04/28/1997	98.38	23.38	75.00	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-11	09/10/1997	98.38	22.62	75.76	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-11	04/19/1998	98.38	23.22	75.16	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-11	09/23/1998	98.38	22.41	75.97	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-11	04/28/1999	98.38	22.86	75.52	--	--	<0.0005	0.00063	<0.0005	<0.0005	<0.01
MW-11	10/13/1999	98.38	22.93	75.45	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-11	05/19/2000	98.38	23.27	75.11	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-11	09/27/2000	98.38	23.14	75.24	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-11	05/05/2001	98.38	23.59	74.79	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-11	08/02/2001 *	98.38	23.05	75.33	<0.001	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-11	10/02/2001	98.38	23.46	74.92	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-11	05/01/2002	160.22	23.32	136.90	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-11	09/20/2002	160.22	23.21	137.01	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / 0.002
MW-11	05/20/2003 *	160.22	--	--	--	--	--	--	--	--	--
MW-11	10/02/2003	160.22	--	--	--	--	--	--	--	--	--
MW-11	05/01/2004	DESTROYED - MAY 2004									
MW-12	02/01/1992 **	--	--	--	--	--	0.0033	ND	ND	0.0038	--
MW-12	09/01/1992 **	--	--	77.00	--	--	ND	ND	ND	ND	--
MW-12	08/01/1993 **	--	--	76.58	--	--	ND	ND	ND	ND	--
MW-12	08/02/2001 *	--	22.51	--	0.000252	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-12	09/21/2001	160.78	--	--	--	--	--	--	--	--	--
MW-12	05/01/2004	DESTROYED - MAY 2004									
MW-14A	05/01/1992 **	--	--	75.72	--	--	ND	ND	ND	ND	--
MW-14A	09/01/1992 **	--	--	75.59	--	--	ND	ND	ND	ND	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-14A	11/01/1992 **	--	--	75.64	--	--	ND	ND	ND	ND	--
MW-14A	05/01/1993 **	--	--	75.29	--	--	ND	ND	ND	ND	--
MW-14A	08/01/1993 **	--	--	75.29	--	--	ND	ND	ND	ND	--
MW-14A	11/01/1993 **	--	--	75.43	--	--	ND	ND	ND	ND	--
MW-14A	06/01/1994 **	--	--	75.23	--	--	ND	ND	ND	ND	--
MW-14A	08/01/1994 **	--	--	74.95	--	--	ND	ND	ND	ND	--
MW-14A	08/02/2001 *	--	23.03	--	0.000321	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-14A	09/21/2001	160.21	--	--	--	--	--	--	--	--	--
MW-14A	05/01/2004	DESTROYED - MAY 2004									
MW-14B	09/01/1992 **	--	--	--	--	--	ND	ND	ND	ND	--
MW-14B	08/01/1993 **	--	--	75.32	--	--	ND	ND	ND	ND	--
MW-14B	08/02/2001 *	--	23.11	--	<0.001	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-14B	09/21/2001	160.20	--	--	--	--	--	--	--	--	--
MW-14B	05/01/2004	DESTROYED - MAY 2004									
MW-15	09/01/1992 **	--	--	--	--	--	ND	ND	ND	ND	--
MW-15	11/01/1992 **	87.01	11.37	75.64	--	--	0.002	ND	ND	ND	--
MW-15	05/01/1993 **	87.01	11.71	75.30	--	--	ND	ND	ND	ND	--
MW-15	08/01/1993 **	87.01	11.71	75.30	--	--	ND	ND	ND	ND	--
MW-15	11/01/1993 **	87.01	11.54	75.47	--	--	ND	ND	ND	ND	--
MW-15	03/01/1994 **	87.01	11.52	75.49	--	--	ND	ND	ND	ND	--
MW-15	06/01/1994 **	87.01	11.77	75.24	--	--	ND	ND	ND	ND	--
MW-15	08/01/1994	87.01	12.02	74.99	--	--	ND	ND	ND	ND	--
MW-15	12/22/1994	87.01	11.68	75.33	--	--	ND	ND	ND	ND	--
MW-15	03/31/1995	87.01	11.53	75.48	--	--	ND	ND	ND	ND	--
MW-15	06/20/1995	87.01	11.23	75.78	--	--	ND	ND	ND	ND	--
MW-15	08/23/1995	87.01	11.55	75.46	--	--	ND	ND	ND	ND	--
MW-15	11/16/1995	87.01	11.55	75.46	--	--	ND	ND	ND	ND	--
MW-15	01/30/1996	87.01	11.78	75.23	--	--	ND	ND	ND	ND	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-15	06/02/1996	87.01	11.48	75.53	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-15	08/26/1996	87.01	12.03	74.98	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-15	10/16/1996	87.01	12.50	74.51	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-15	04/28/1997	87.01	12.04	74.97	--	--	<0.0005	0.000527	<0.0005	<0.001	--
MW-15	09/10/1997	87.01	11.29	75.72	--	--	<0.002	<0.002	<0.002	<0.002	--
MW-15	04/19/1998	87.01	11.90	75.11	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-15	09/23/1998	87.01	11.06	75.95	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-15	04/28/1999	87.01	11.52	75.49	--	--	<0.0005	0.00059	<0.0005	<0.0005	<0.01
MW-15	10/13/1999	87.01	11.57	75.44	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
MW-15	05/19/2000	87.01	11.95	75.06	--	--	<0.001	<0.001	<0.001	<0.002	<0.002
MW-15	09/27/2000	87.01	11.80	75.21	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
MW-15	05/05/2001	87.01	--	--	--	--	--	--	--	--	--
MW-15	10/20/2001	87.01	--	--	--	--	--	--	--	--	--
MW-15	05/01/2002	148.90	--	--	--	--	--	--	--	--	--
MW-15	09/20/2002	148.90	--	--	--	--	--	--	--	--	--
MW-15	05/20/2003 *	148.90	--	--	--	--	--	--	--	--	--
MW-15	10/02/2003	148.90	8.58	140.32	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-15	06/01/2004	148.90	--	--	--	--	--	--	--	--	--
MW-15	09/21/2004 *	148.90	--	--	--	--	--	--	--	--	--
MW-15	05/12/2005	148.90	--	--	--	--	--	--	--	--	--
MW-15	09/19/2005	148.90	--	--	--	--	--	--	--	--	--
MW-15	05/08/2006	148.90	--	--	--	--	--	--	--	--	--
MW-16	08/02/2001 *	--	13.92	--	<0.0001	<0.05	<0.001	<0.001	<0.001	<0.003	--
MW-16	10/02/2001	--	14.33	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-16	05/01/2002	151.08	14.12	136.96	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
MW-16	09/20/2002	151.08	14.04	137.04	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / 0.002
MW-16	05/20/2003 *	151.08	14.51	136.57	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
MW-16	10/02/2003	151.08	14.30	136.78	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-16	06/01/2004	151.08	13.86	137.22	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-16	09/21/2004 *	151.08	14.32	136.76	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002
MW-16	05/12/2005	151.08	14.04	137.04	--	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025
MW-16	09/19/2005	151.08	13.53	137.55	--	--	<0.0005	<0.0005	<0.0005	<0.001	0.0025
MW-16	05/08/2006	151.08	14.53	136.55	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--
MW-16	09/24/2006	152.13	13.69	138.44	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-16	05/14/2007	152.13	14.13	138.00	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.0005
MW-16	09/12/2007	152.13	14.01	138.12	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
MW-16	05/01/2008	152.13	14.18	137.95	--	--	<0.0005	<0.0005	<0.0005	<0.0015	--
MW-16	05/14/2009	152.13	FENCED, CANNOT BE ACCESSED								
MW-17	08/02/2001 *	--	11.70	--	0.000118	<0.05	<0.0001	<0.001	<0.001	<0.003	--
MW-17	10/02/2001	--	12.12	--	--	--	<0.0005	<0.005	<0.005	<0.001	<0.001
MW-17	05/01/2002	148.89	11.91	136.98	--	--	<0.0005	<0.005	<0.005	<0.001	<0.001
MW-17	09/20/2002	148.89	11.86	137.03	--	--	<0.0005	<0.005	<0.005	<0.001	<0.001 / 0.002
MW-17	05/20/2003 *	148.89	12.30	136.59	--	--	<0.0005	<0.005	<0.005	<0.001	<0.0005
MW-17	10/02/2003	148.89	12.07	136.82	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-17	06/01/2004	148.89	11.65	137.24	--	--	<0.0005 / <0.0005	<0.0005 / <0.0007	<0.0005 / <0.0008	<0.001 / <0.0008	<0.002 / <0.002
MW-17	09/21/2004 *	148.89	12.13	136.76	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002
MW-17	05/12/2005	148.89	11.81	137.08	--	--	--	--	--	--	--
MW-17	09/19/2005	148.89	11.45	137.44	--	--	--	--	--	--	--
MW-17	05/08/2006	148.89	13.56	135.33	--	--	--	--	--	--	--
MW-17	09/24/2006	148.91	12.69	136.22	--	--	--	--	--	--	--
MW-17	05/14/2007	148.91	13.27	135.64	--	--	--	--	--	--	--
MW-17	09/21/2007	148.91	11.77	137.14	--	--	--	--	--	--	--
MW-17	05/01/2008	148.91	11.90	137.01	--	--	--	--	--	--	--
MW-17	05/14/2009	148.91	FENCED, CANNOT BE ACCESSED								
MW-18	08/02/2001 *	--	13.30	--	0.0132	0.162	<0.001	<0.001	<0.001	<0.003	--
MW-18	10/02/2001	--	13.46	--	--	--	<0.0005	<0.0005	0.00139	0.0112	<0.001
MW-18	05/01/2002	150.50	12.88	137.62	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001



Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
MW-18	09/20/2002	150.50	13.17	137.33	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001 / 0.002
MW-18	05/20/2003 *	150.50	13.60	136.90	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
MW-18	10/02/2003	150.50	14.23	136.27	--	--	<0.0005	<0.0007	<0.0008	<0.0016	<0.002
MW-18	06/01/2004	150.50	12.96	137.54	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002
MW-18	09/21/2004 *	150.50	14.01	136.49	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.002
MW-18	05/12/2005	150.50	13.06	137.44	--	--	--	--	--	--	--
MW-18	09/19/2005	150.50	12.74	137.76	--	--	--	--	--	--	--
MW-18	05/08/2006	150.78	--	--	--	--	--	--	--	--	--
Trip Blank	01/30/1996	--	--	--	--	--	ND	ND	ND	ND	--
Trip Blank	06/02/1996	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	08/26/1996	--	--	--	--	--	<0.0005	0.00061	<0.0005	<0.001	--
Trip Blank	10/16/1996	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	04/28/1997	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	09/10/1997	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	04/19/1998	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	09/23/1998	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	04/28/1999	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.01
Trip Blank	10/13/1999	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.005
Trip Blank	09/27/2000	--	--	--	--	--	<0.0005	0.000572	<0.0005	<0.001	<0.005
Trip Blank	05/05/2001	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.005
Trip Blank	10/02/2001	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Trip Blank	05/01/2002	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Trip Blank	09/20/2002	--	--	--	--	--	<0.0005	0.000518	<0.0005	<0.001	<0.001
Trip Blank	05/20/2003 *	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	10/02/2003	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	06/01/2004	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	09/21/2004 *	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	05/12/2005	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025
Trip Blank	09/19/2005	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results**  
**Former Chevron-Branded Service Station 97324**  
**4417 Lake Otis Parkway**  
**Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCs				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
Trip Blank	05/08/2006	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	09/24/2006	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	05/14/2007	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	<0.0005
Trip Blank	09/21/2007	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	05/01/2008	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.0015	--
Trip Blank	07/15/2008	--	--	--	--	<0.01	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	04/30/2009	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	08/19/2009	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	04/20/2010	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	06/10/2010	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.001	--
Trip Blank	08/27/2010	--	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	--
Trip Blank	05/24/2011	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	07/26/2011	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	11/10/2011	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	06/20/2012	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	11/05/2012	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	04/30/2013	--	--	--	--	<0.10	<0.000062	<0.000077	<0.000081	<0.00022	--
Trip Blank	11/08/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	--
Trip Blank	04/28/2014	--	--	--	--	<0.050	<0.00015	<0.00011	<0.00016	<0.00040	--
Trip Blank	11/07/2014	--	--	--	--	<0.050	<0.00015	0.00012 J	<0.00016	<0.00040	--
Trip Blank	04/29/2015	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	11/06/2015	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	4/21/2016	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	11/1/2016	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	10/17/2017	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	--
Trip Blank	04/27/2018	--	--	--	--	<0.010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blank	10/18/2018	-	-	-	-	<0.014	<0.0002	<0.0002	<0.0002	<0.0005	--
Tudor Motel	09/21/2007	--	--	--	--	--	--	--	--	--	--
Tudor Motel	05/01/2008	--	--	--	--	--	--	--	--	--	--

Table 2

**Historical Hydrocarbon and Primary VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS				
					DRO	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	Units	ft msl	ft btoc	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>					<b>1.5</b>	<b>2.2</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>0.14</b>
Tudor Motel	07/15/2008	--	--	--	--	--	--	--	--	--	--

**Notes and Abbreviations**

TOC = top of casing

DTW = depth to water

GWE = groundwater elevation

TPH = total petroleum hydrocarbons

DRO = diesel range organics by Alaska Series Method AK102

GRO = gasoline range organics by Alaska Series Method AK101

Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B or SW-E46 8021B

Total Xylenes = Sum of m-, o-, and p-xylenes

VOC = volatile organic compounds by EPA Method 524.2

MTBE = methyl tertiary-butyl ether

ADEC = Alaska Department of Environmental Conservation

<sup>a</sup> = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

ft msl = feet above mean sea level

ft btoc = feet below top of casing

mg/L = milligrams per liter

J = Estimated value

- = Not measured / not analyzed

&lt;x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

HS = collected via hydrasleeve

\* = Sample date defaulted to first date listed in historical data table

\*\* = Sample date accurate to month and year only

Table 3

**Current Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-1R	10/18/2018	<0.002	<0.0002	<0.0002	<0.0002	<0.0002
MW-2R	10/18/2018	<b>0.003 J / 0.003 J</b>	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002
MW-8RR	10/18/2018	0.003 J	<0.0002	0.003	<0.0002	<0.0002
MW-9	10/18/2018	<0.002	<b>0.022</b>	<b>0.082</b>	<b>0.064</b>	<0.0002
Trip Blank	10/18/2018	<0.002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes and Abbreviations**

HVOC = Halogenated Volatile Organic Compounds by EPA Method 524.2 or SW-846 8260B

TCE = trichloroethylene

PCE = tetrachloroethylene

ADEC = Alaska Department of Environmental Conservation

<sup>a</sup> = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)

**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

mg/L = milligrams per liter

<x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-1	02/01/1992 **	--	--	--	--	--
MW-1	05/01/1992 **	--	--	--	--	--
MW-1	09/01/1992 **	--	--	--	--	--
MW-1	11/01/1992 **	--	--	--	--	--
MW-1	05/01/1993 **	--	--	--	--	--
MW-1	08/01/1993 **	--	--	--	--	--
MW-1	11/01/1993 **	--	--	--	--	--
MW-1	03/01/1994 **	--	--	--	--	--
MW-1	06/01/1994 **	--	--	--	--	--
MW-1	08/01/1994 **	--	--	--	--	--
MW-1	12/22/1994	--	--	--	--	--
MW-1	03/31/1995	--	--	--	--	--
MW-1	06/20/1995	--	--	--	--	--
MW-1	08/23/1995	--	--	--	--	--
MW-1	11/16/1995	--	--	--	--	--
MW-1	01/30/1996	--	--	--	--	--
MW-1	06/02/1996	--	--	--	--	--
MW-1	08/26/1996	--	--	--	--	--
MW-1	10/16/1996	--	--	--	--	--
MW-1	04/28/1997	--	--	--	--	--
MW-1	09/10/1997	--	--	--	--	--
MW-1	04/19/1998	--	--	--	--	--
MW-1	09/23/1998	--	--	--	--	--
MW-1	04/28/1999	--	--	--	--	--
MW-1	05/05/2001	--	--	--	--	--
MW-1	08/02/2001 *	--	--	--	--	--
MW-1	10/02/2001	--	--	--	--	--
MW-1	05/01/2002	--	--	--	--	--
MW-1	09/20/2002	--	--	--	--	--
MW-1	05/20/2003 *	--	--	--	--	--

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-1	10/02/2003	--	--	--	--	--
MW-1	05/01/2004	DESTROYED - MAY 2004				
MW-1R	09/24/2006	--	--	--	--	--
MW-1R	05/14/2007	--	--	--	--	--
MW-1R	09/21/2007	--	--	--	--	--
MW-1R	05/01/2008	<b>0.0182</b>	<b>0.004</b>	<0.005	<0.07	<0.005
MW-1R	07/15/2008	<b>0.021</b>	<0.01	<0.008	<0.008	<b>0.021</b>
MW-1R	05/14/2009	<0.005 / <0.005	<0.010 / <0.010	<0.008 / <0.008	<0.008 / <0.008	<0.020 / <0.020
MW-1R	08/26/2009	<0.005J / <b>0.021 J</b>	<0.010 / <0.010	<0.008 / <0.008	<0.008 / <0.008	<0.020 / <0.020
MW-1R	06/15/2010	<b>0.014 J / 0.010 J</b>	<0.010 / <0.010	<0.008 / <0.008	<0.008 / <0.008	<0.020 / <0.020
MW-1R	09/05/2010	<0.003 / <0.003	<0.005 / <0.005	<0.004 / <0.004	<0.004 / <0.004	<0.010 / <0.010
MW-1R	05/24/2011	<b>0.012</b>	0.001 J	<0.0008	<0.0008	<0.002
MW-1R	05/24/2011	<b>0.012</b>	0.001 J	<0.0008	<0.0008	<0.002
MW-1R	11/10/2011	<b>0.004 J / 0.007 J</b>	<0.001 / <0.001	<0.0008 / <0.0008	<0.0008 / <0.0008	<0.002 / <0.002
MW-1R	06/20/2012	<b>0.004 J / 0.004 J</b>	<0.001 / <0.001	0.0009 J / <0.0008	<0.0008 / <0.0008	<0.002 / <0.002
MW-1R	11/05/2012	0.0008 J / 0.0008 J	<0.001 / <0.001	<0.0008 / <0.0008	<0.0008 / <0.0008	<0.002 / <0.002
MW-1R	04/30/2013	<b>0.003 / 0.0033</b>	0.00013 J / 0.00015 J	0.0013 / 0.0012	<0.000085 / <0.000085	<0.002 / <0.002
MW-1R <sup>HS</sup>	04/30/2013	<b>0.0028 / 0.0034</b>	0.00011 J / 0.00012 J	0.0012 / 0.001	<0.000085 / <0.000085	<0.002 / <0.002
MW-1R	11/08/2013	<b>0.0042 J / 0.0030 J</b>	<0.00060 / <0.00060	0.0021 J / 0.0020 J	<0.0011 / <0.0011	<0.010 / <0.010
MW-1R	04/28/2014	<b>0.0037 / 0.0037</b>	0.00065 / 0.00061	0.0024 / 0.0022	<0.00013 / <0.00013	<0.0020 / <0.0020
MW-1R <sup>HS</sup>	04/28/2014	<0.00066 UJ / 0.0038 J	<0.00046 / 0.00066	<0.00078 UJ / 0.0017 J	<0.00066 / <0.00013	<0.010 / <0.0020
MW-1R	11/07/2014	<0.00066 / 0.0021 J	<0.00046 / <0.00046	0.0019 J / 0.0016 J	<0.00066 / <0.00066	<0.010 / <0.010
MW-1R	04/29/2015	<b>0.003</b>	<0.0005	<0.0005	<0.0005	<0.002
MW-1R	11/06/2015	<0.001	<0.001	<0.001	<0.001	<0.004
MW-1R	04/21/2016	0.001	<0.0005	<0.0005	<0.0005	<0.002
MW-1R	11/01/2016	<b>0.002</b>	<0.0005	<0.0005	<0.0005	<0.002
MW-1R	05/01/2017	0.001	<0.0005	0.0007 J	<0.0005	<0.002
MW-1R	10/17/2017	0.001	<0.0005	<0.0005	<0.0005	<0.0005
MW-1R	04/27/2018	<b>0.002</b>	<0.0005	<0.0005	<0.0005	<0.0005

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-1R	10/18/2018	<0.002	<0.0002	<0.0002	<0.0002	<0.0002
MW-2R	09/24/2006	--	--	--	--	--
MW-2R	05/14/2007	--	--	--	--	--
MW-2R	09/21/2007	--	--	--	--	--
MW-2R	05/01/2008	<b>0.0568 / 0.0505</b>	<0.005 / <0.005	<0.005 / 0.00079	<0.07 / <0.07	<0.005 / <0.005
MW-2R	07/15/2008	<b>0.035 / 0.037</b>	<0.005 / <0.005	<0.004 / <0.005	<0.004 / <0.07	<0.010 / <0.005
MW-2R	05/14/2009	<b>0.027</b>	<0.002	<0.002	<0.002	<0.004
MW-2R	08/26/2009	<b>0.056</b>	<0.005	<0.004	<0.004	<0.010
MW-2R	06/15/2010	<b>0.017</b>	<0.001	<0.0008	<0.0008	<0.002
MW-2R	09/05/2010	<b>0.008</b>	<0.001	0.001 J	<0.0008	<0.002
MW-2R	05/24/2011	<b>0.016 / 0.015</b>	<0.001 / <0.001	<0.0008 / <0.0008	<0.0008 / <0.0008	<0.002 / <0.002
MW-2R	11/10/2011	<b>0.012</b>	<0.001	<0.0008	<0.0008	<0.002
MW-2R	06/20/2012	<b>0.011</b>	<0.001	<0.0008	<0.0008	<0.002
MW-2R	11/08/2012	0.002 J	<0.001	<0.0008	<0.0008	<0.002
MW-2R	04/30/2013	<b>0.0091</b>	<0.000083	0.00089 J	0.00022 J	<0.002
MW-2R <sup>HS</sup>	04/30/2013	0.0049	<0.000083	0.00045 J	<0.000085	<0.002
MW-2R	11/08/2013	<b>0.0053</b>	<0.00012	0.00047 J	<0.00023	<0.0020
MW-2R	04/28/2014	<b>0.011</b>	<0.000091	0.00077 J	<0.00013	<0.0020
MW-2R <sup>HS</sup>	04/28/2014	<b>0.0021</b>	<0.000091	0.00027 J	<0.00013	<0.0020
MW-2R	11/07/2014	<0.00066	<0.00046	<0.00078	<0.00066	<0.010
MW-2R	04/29/2015	<b>0.003 / 0.003</b>	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002
MW-2R	11/06/2015	<b>0.002 / &lt;0.003</b>	<0.001 / <0.003	<0.001 / <0.003	<0.001 / <0.003	<0.004 / <0.010
MW-2R	04/21/2016	<b>0.008 / 0.009 J</b>	<0.0005 / <0.005	0.0006 J / <0.005	<0.0005 / <0.005	<0.002 / <0.02
MW-2R	11/01/2016	<b>0.011 / 0.011</b>	<0.0005 / <0.0005	0.0008 J / 0.0008 J	<0.0005 / <0.0005	<0.002 / <0.002
MW-2R	05/01/2017	<b>0.007 / 0.008</b>	<0.0005 / <0.0005	0.0006 J / 0.0006 J	<0.0005 / <0.0005	<0.002 / <0.002
MW-2R	10/17/2017	<b>0.009 / 0.009</b>	<0.0005 / <0.0005	0.0009 J / 0.0008 J	<0.0005 / <0.0005	<0.0005 / <0.0005
MW-2R	04/27/2018	<b>0.007 / 0.007</b>	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005
MW-2R	10/18/2018	<b>0.003 J / 0.003 J</b>	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-3	02/01/1992 **	--	--	--	--	--
MW-3	05/01/1992 **	--	--	--	--	--
MW-3	09/01/1992 **	--	--	--	--	--
MW-3	11/01/1992 **	--	--	--	--	--
MW-3	05/01/1993 **	--	--	--	--	--
MW-3	08/01/1993 **	--	--	--	--	--
MW-3	11/01/1993 **	--	--	--	--	--
MW-3	03/01/1994 **	--	--	--	--	--
MW-3	06/01/1994 **	--	--	--	--	--
MW-3	08/01/1994 **	--	--	--	--	--
MW-3	12/22/1994	--	--	--	--	--
MW-3	04/10/1995	--	--	--	--	--
MW-3	06/20/1995	--	--	--	--	--
MW-3	06/21/1995	--	--	--	--	--
MW-3	08/23/1995	--	--	--	--	--
MW-3	11/16/1995	--	--	--	--	--
MW-3	01/30/1996	--	--	--	--	--
MW-3	06/02/1996	--	--	--	--	--
MW-3	08/26/1996	--	--	--	--	--
MW-3	10/16/1996	--	--	--	--	--
MW-3	04/28/1997	--	--	--	--	--
MW-3	09/10/1997	--	--	--	--	--
MW-3	04/19/1998	--	--	--	--	--
MW-3	09/23/1998	--	--	--	--	--
MW-3	04/28/1999	--	--	--	--	--
MW-3	10/13/1999	--	--	--	--	--
MW-3	05/19/2000	--	--	--	--	--
MW-3	09/27/2000	--	--	--	--	--
MW-3	05/05/2001	--	--	--	--	--
MW-3	08/02/2001 *	--	--	--	--	--



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**Historical Additional VOC Analytical Results  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-3	10/02/2001	--	--	--	--	--
MW-3	05/01/2002	--	--	--	--	--
MW-3	09/20/2003	--	--	--	--	--
MW-3	05/20/2003 *	--	--	--	--	--
MW-3	10/02/2003	--	--	--	--	--
MW-3	05/01/2004			DESTROYED - MAY 2004		
MW-4	02/01/1992 **	--	--	--	--	--
MW-4	05/01/1992 **	--	--	--	--	--
MW-4	09/01/1992 **	--	--	--	--	--
MW-4	11/01/1992 **	--	--	--	--	--
MW-4	05/01/1993 **	--	--	--	--	--
MW-4	08/01/1993 **	--	--	--	--	--
MW-4	11/01/1993 **	--	--	--	--	--
MW-4	03/01/1994 **	--	--	--	--	--
MW-4	06/01/1994 **	--	--	--	--	--
MW-4	08/01/1994 **	--	--	--	--	--
MW-4	12/22/1994	--	--	--	--	--
MW-4	03/31/1995	--	--	--	--	--
MW-4	06/20/1995	--	--	--	--	--
MW-4	08/23/1995	--	--	--	--	--
MW-4	11/16/1995	--	--	--	--	--
MW-4	01/30/1996	--	--	--	--	--
MW-4	06/02/1996	--	--	--	--	--
MW-4	08/26/1996	--	--	--	--	--
MW-4	04/28/1997	--	--	--	--	--
MW-4	09/10/1997	--	--	--	--	--
MW-4	04/19/1998	--	--	--	--	--
MW-4	09/23/1998	--	--	--	--	--
MW-4	05/02/1999	--	--	--	--	--

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**Historical Additional VOC Analytical Results  
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4417 Lake Otis Parkway  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-4	10/13/1999	--	--	--	--	--
MW-4	05/19/2000	--	--	--	--	--
MW-4	09/27/2000	--	--	--	--	--
MW-4	05/05/2001	--	--	--	--	--
MW-4	08/02/2001 *	--	--	--	--	--
MW-4	10/02/2001	--	--	--	--	--
MW-4	05/01/2002	--	--	--	--	--
MW-4	09/20/2002	--	--	--	--	--
MW-4	05/20/2003 *	--	--	--	--	--
MW-4	10/02/2003	--	--	--	--	--
MW-4	05/01/2004	DESTROYED - MAY 2004				
MW-5	02/01/1992 **	--	--	--	--	--
MW-5	05/01/1992 **	--	--	--	--	--
MW-5	09/01/1992 **	--	--	--	--	--
MW-5	11/01/1992 **	--	--	--	--	--
MW-5	05/01/1993 **	--	--	--	--	--
MW-5	08/01/1993 **	--	--	--	--	--
MW-5	11/01/1993 **	--	--	--	--	--
MW-5	03/01/1994 **	--	--	--	--	--
MW-5	06/01/1994 **	--	--	--	--	--
MW-5	08/01/1994 **	--	--	--	--	--
MW-5	12/22/1994	--	--	--	--	--
MW-5	03/31/1995	--	--	--	--	--
MW-5	06/20/1995	--	--	--	--	--
MW-5	08/23/1995	--	--	--	--	--
MW-5	11/16/1995	--	--	--	--	--
MW-5	01/30/1996	--	--	--	--	--
MW-5	06/02/1996	--	--	--	--	--
MW-5	08/26/1996	--	--	--	--	--

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4417 Lake Otis Parkway  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-5	10/16/1996	--	--	--	--	--
MW-5	04/28/1997	--	--	--	--	--
MW-5	09/10/1997	--	--	--	--	--
MW-5	04/19/1998	--	--	--	--	--
MW-5	09/23/1998	--	--	--	--	--
MW-5	04/28/1999	--	--	--	--	--
MW-5	10/13/1999	--	--	--	--	--
MW-5	05/19/2000	--	--	--	--	--
MW-5	09/27/2000	--	--	--	--	--
MW-5	05/05/2001	--	--	--	--	--
MW-5	08/02/2001 *	--	--	--	--	--
MW-5	10/02/2001	--	--	--	--	--
MW-5	05/01/2002	--	--	--	--	--
MW-5	09/20/2002	--	--	--	--	--
MW-5	05/20/2003 *	--	--	--	--	--
MW-5	10/02/2003	--	--	--	--	--
MW-5	05/01/2004			DESTROYED - MAY 2004		
MW-6	02/01/1992 **	--	--	--	--	--
MW-6	05/01/1992 **	--	--	--	--	--
MW-6	09/01/1992 **	--	--	--	--	--
MW-6	08/01/1993 **	--	--	--	--	--
MW-6	11/01/1993 **	--	--	--	--	--
MW-6	08/02/2001 *	--	--	--	--	--
MW-6	09/21/2001	--	--	--	--	--
MW-6	05/01/2004			DESTROYED - MAY 2004		
MW-7	02/01/1992 **	--	--	--	--	--
MW-7	05/01/1992 **	--	--	--	--	--
MW-7	09/01/1992 **	--	--	--	--	--

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4417 Lake Otis Parkway  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-7	11/01/1992 **	--	--	--	--	--
MW-7	05/01/1993 **	--	--	--	--	--
MW-7	08/01/1993 **	--	--	--	--	--
MW-7	11/01/1993 **	--	--	--	--	--
MW-7	03/01/1994 **	--	--	--	--	--
MW-7	06/01/1994 **	--	--	--	--	--
MW-7	08/01/1994 **	--	--	--	--	--
MW-7	12/22/1994	--	--	--	--	--
MW-7	03/31/1995	--	--	--	--	--
MW-7	06/20/1995	--	--	--	--	--
MW-7	08/23/1995	--	--	--	--	--
MW-7	11/16/1995	--	--	--	--	--
MW-7	01/30/1996	--	--	--	--	--
MW-7	06/02/1996	--	--	--	--	--
MW-7	08/26/1996	--	--	--	--	--
MW-7	10/16/1996	--	--	--	--	--
MW-7	04/28/1997	--	--	--	--	--
MW-7	09/10/1997	--	--	--	--	--
MW-7	04/19/1998	--	--	--	--	--
MW-7	09/23/1998	--	--	--	--	--
MW-7	04/28/1999	--	--	--	--	--
MW-7	10/13/1999	--	--	--	--	--
MW-7	05/19/2000	--	--	--	--	--
MW-7	09/27/2000	--	--	--	--	--
MW-7	05/05/2001	--	--	--	--	--
MW-7	08/02/2001 *	--	--	--	--	--
MW-7	10/02/2001	--	--	--	--	--
MW-7	05/01/2002	--	--	--	--	--
MW-7	09/20/2002	--	--	--	--	--
MW-7	05/20/2003 *	--	--	--	--	--

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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-7	10/02/2003	--	--	--	--	--
MW-7	05/01/2004			DESTROYED - MAY 2004		
MW-8	02/01/1992 **	--	--	--	--	--
MW-8	05/01/1992 **	--	--	--	--	--
MW-8	09/01/1992 **	--	--	--	--	--
MW-8	11/01/1992 **	--	--	--	--	--
MW-8	05/01/1993 **	--	--	--	--	--
MW-8	08/01/1993 **	--	--	--	--	--
MW-8	11/01/1993 **	--	--	--	--	--
MW-8	03/01/1994 **	--	--	--	--	--
MW-8	06/01/1994 **	--	--	--	--	--
MW-8	08/01/1994 **	--	--	--	--	--
MW-8	12/22/1994	--	--	--	--	--
MW-8	03/31/1995	--	--	--	--	--
MW-8	06/20/1995	--	--	--	--	--
MW-8	08/23/1995	--	--	--	--	--
MW-8	11/16/1995	--	--	--	--	--
MW-8	01/30/1996	--	--	--	--	--
MW-8	06/02/1996	--	--	--	--	--
MW-8	08/26/1996	--	--	--	--	--
MW-8	10/16/1996	--	--	--	--	--
MW-8	04/28/1997	--	--	--	--	--
MW-8	09/10/1997	--	--	--	--	--
MW-8	04/19/1998	--	--	--	--	--
MW-8	09/23/1998	--	--	--	--	--
MW-8	09/21/2001	--	--	--	--	--
MW-8R	09/24/2006	--	--	--	--	--
MW-8R	05/14/2007	--	--	--	--	--

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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-8R	09/21/2007	--	--	--	--	--
MW-8R	05/01/2008	0.0174	<0.005	0.00695	<0.07	<0.005
MW-8R	07/15/2008	0.011	<0.010	<0.008	<0.008	<0.020
MW-8R	05/14/2009	<0.003	<0.005	0.005	<0.004	<0.010
MW-8R	08/26/2009	<0.005	<0.010	<0.008	<0.008	0.023 J
MW-8R	04/20/2010	0.004 J / 0.004 J	<0.005 / <0.005	0.005 J / <0.004	<0.004 / <0.004	<0.010 / <0.010
MW-8RR	10/18/2018	0.003 J	<0.0002	0.003	<0.0002	<0.0002
MW-8RR	07/26/2011	0.024	<0.002	0.011	<0.002	<0.004
MW-8RR	11/10/2011	0.005	<0.001	<0.0008	<0.0008	<0.002
MW-8RR	06/20/2012	0.002 J	<0.001	0.0008 J	<0.0008	<0.002
MW-8RR	11/08/2012	0.0006 J	<0.001	0.002 J	<0.0008	<0.002
MW-8RR	04/30/2013	0.0033	<0.000083	0.0019	<0.000085	<0.002
MW-8RR <sup>HS</sup>	04/30/2013	0.0025	<0.000083	0.002	0.00023 J	<0.002
MW-8RR	11/08/2013	0.00055 J	<0.00012	0.0032	<0.00023	<0.0020
MW-8RR	04/28/2014	0.00065 J	<0.000091	0.0042	<0.00013	<0.0020
MW-8RR <sup>HS</sup>	04/28/2014	0.00061 J	<0.000091	0.0042	<0.00013	<0.0020
MW-8RR	11/07/2014	0.0013	<0.000091	0.0024	<0.00013	<0.0020
MW-8RR	04/29/2015	0.001	<0.0005	0.001	<0.0005	<0.002
MW-8RR	11/06/2015	<0.001	<0.001	<0.001	<0.001	<0.004
MW-8RR	04/21/2016	<0.001	<0.0005	0.002	<0.0005	<0.002
MW-8RR	11/01/2016	0.001	<0.0005	0.004	<0.0005	<0.002
MW-8RR	05/01/2017	0.002	<0.0005	0.004	<0.0005	<0.002
MW-8RR	10/17/2017	0.001	<0.0005	0.003	<0.0005	<0.0005
MW-8RR	04/27/2018	0.001	<0.0005	0.002	<0.0005	<0.0005
MW-9	02/01/1992 **	--	--	--	--	--
MW-9	05/01/1992 **	--	--	--	--	--
MW-9	09/01/1992 **	--	--	--	--	--
MW-9	11/01/1992 **	--	--	--	--	--

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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-9	05/01/1993 **	--	--	--	--	--
MW-9	08/01/1993 **	--	--	--	--	--
MW-9	11/01/1993 **	--	--	--	--	--
MW-9	03/01/1994 **	--	--	--	--	--
MW-9	06/01/1994 **	--	--	--	--	--
MW-9	08/01/1994 **	--	--	--	--	--
MW-9	12/22/1994	--	--	--	--	--
MW-9	03/31/1995	--	--	--	--	--
MW-9	06/20/1995	--	--	--	--	--
MW-9	08/23/1995	--	--	--	--	--
MW-9	11/16/1995	--	--	--	--	--
MW-9	01/30/1996	--	--	--	--	--
MW-9	06/02/1996	--	--	--	--	--
MW-9	08/26/1996	--	--	--	--	--
MW-9	10/16/1996	--	--	--	--	--
MW-9	04/28/1997	--	--	--	--	--
MW-9	09/10/1997	--	--	--	--	--
MW-9	04/19/1998	--	--	--	--	--
MW-9	09/23/1998	--	--	--	--	--
MW-9	04/28/1999	--	--	--	--	--
MW-9	10/13/1999	--	--	--	--	--
MW-9	05/19/2000	--	--	--	--	--
MW-9	09/27/2000	--	--	--	--	--
MW-9	05/05/2001	--	--	--	--	--
MW-9	08/02/2001 *	--	--	--	--	--
MW-9	10/02/2001	--	--	--	--	--
MW-9	05/01/2002	--	--	--	--	--
MW-9	09/20/2002	--	--	--	--	--
MW-9	05/20/2003 *	--	--	--	--	--
MW-9	10/02/2003	--	--	--	--	--

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-9	06/01/2004	--	--	--	--	--
MW-9	09/21/2004 *	--	--	--	--	--
MW-9	05/12/2005	--	--	--	--	--
MW-9	09/19/2005	--	--	--	--	--
MW-9	05/08/2006	--	--	--	--	--
MW-9	09/24/2006	--	--	--	--	--
MW-9	05/14/2007	--	--	--	--	--
MW-9	09/21/2007	--	--	--	--	--
MW-9	05/01/2008	<0.005	<b>0.05</b>	<b>0.27</b>	<b>0.119</b>	<0.005
MW-9	07/15/2008	<0.0005	<b>0.043</b>	<b>0.21</b>	<b>0.097</b>	<0.002
MW-9	05/14/2009	<0.0005	<b>0.025</b>	<b>0.097</b>	<b>0.064</b>	<0.002
MW-9	08/26/2009	<0.0005	<b>0.036</b>	<b>0.20</b>	<0.0008	<0.002
MW-9	04/20/2010	<0.0005	<b>0.044</b>	<b>0.28 J</b>	<b>0.13</b>	<0.002
MW-9	09/05/2010	--	--	--	--	--
MW-9	05/24/2011	<0.0005	<b>0.011</b>	<b>0.055</b>	0.032	<0.002
MW-9	11/10/2011	<0.0005	<b>0.005</b>	0.034	<b>0.013</b>	<0.002
MW-9	06/20/2012	<0.0005	<b>0.006</b>	0.013	0.014	<0.002
MW-9	04/30/2013	<0.00037	<b>0.0492</b>	<b>0.293</b>	<b>0.114</b>	<0.002
MW-g <sup>HS</sup>	04/30/2013	<0.00037	<b>0.0441</b>	<b>0.216</b>	<b>0.112</b>	<0.002
MW-9	11/08/2013	<0.00022	<b>0.0055</b>	0.024	0.013	<0.0020
MW-9	04/28/2014	<0.00013	<b>0.033</b>	<b>0.18</b>	<b>0.064</b>	<0.0020
MW-g <sup>HS</sup>	04/28/2014	<0.00013	<0.0041	0.018	0.0067	<0.0020
MW-9	11/07/2014	<0.00013	<b>0.023</b>	<b>0.12</b>	<b>0.040</b>	<0.0020
MW-9	04/29/2015	<0.0005	<b>0.003</b>	0.008	0.005	<0.002
MW-9	11/06/2015	<0.001	<b>0.025</b>	<b>0.12</b>	<b>0.078</b>	<0.004
MW-9	04/21/2016	<0.0005	<b>0.003</b>	0.012	0.007	<0.002
MW-9	11/01/2016	<0.0005	<b>0.003</b>	0.012	0.007	<0.002
MW-9	05/01/2017	<0.003	<b>0.008</b>	0.026	0.030	<0.010
MW-9	10/17/2017	<0.0005	<b>0.003</b>	0.012	0.01	<0.0005
MW-9	04/27/2018	<0.0005	<b>0.014</b>	<b>0.054</b>	<b>0.039</b>	<0.0005



Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-9	10/18/2018	<0.002	0.022	0.082	0.064	<0.0002
MW-10	02/01/1992 **	--	--	--	--	--
MW-10	09/01/1992 **	--	--	--	--	--
MW-10	08/01/1993 **	--	--	--	--	--
MW-10	08/02/2001 *	--	--	--	--	--
MW-10	09/21/2001	--	--	--	--	--
MW-10	05/01/2004	DESTROYED - MAY 2004				
MW-11	02/01/1992 **	--	--	--	--	--
MW-11	05/01/1992 **	--	--	--	--	--
MW-11	09/01/1992 **	--	--	--	--	--
MW-11	11/01/1992 **	--	--	--	--	--
MW-11	05/01/1993 **	--	--	--	--	--
MW-11	08/01/1993 **	--	--	--	--	--
MW-11	11/01/1993 **	--	--	--	--	--
MW-11	03/01/1994 **	--	--	--	--	--
MW-11	06/01/1994 **	--	--	--	--	--
MW-11	08/01/1994 **	--	--	--	--	--
MW-11	12/22/1994	--	--	--	--	--
MW-11	03/31/1995	--	--	--	--	--
MW-11	06/20/1995	--	--	--	--	--
MW-11	08/23/1995	--	--	--	--	--
MW-11	11/16/1995	--	--	--	--	--
MW-11	01/30/1996	--	--	--	--	--
MW-11	06/02/1996	--	--	--	--	--
MW-11	08/26/1996	--	--	--	--	--
MW-11	10/16/1996	--	--	--	--	--
MW-11	04/28/1997	--	--	--	--	--
MW-11	09/10/1997	--	--	--	--	--

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**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-11	04/19/1998	--	--	--	--	--
MW-11	09/23/1998	--	--	--	--	--
MW-11	04/28/1999	--	--	--	--	--
MW-11	10/13/1999	--	--	--	--	--
MW-11	05/19/2000	--	--	--	--	--
MW-11	09/27/2000	--	--	--	--	--
MW-11	05/05/2001	--	--	--	--	--
MW-11	08/02/2001 *	--	--	--	--	--
MW-11	10/02/2001	--	--	--	--	--
MW-11	05/01/2002	--	--	--	--	--
MW-11	09/20/2002	--	--	--	--	--
MW-11	05/20/2003 *	--	--	--	--	--
MW-11	10/02/2003	--	--	--	--	--
MW-11	05/01/2004			DESTROYED - MAY 2004		
MW-12	02/01/1992 **	--	--	--	--	--
MW-12	09/01/1992 **	--	--	--	--	--
MW-12	08/01/1993 **	--	--	--	--	--
MW-12	08/02/2001 *	--	--	--	--	--
MW-12	09/21/2001	--	--	--	--	--
MW-12	05/01/2004			DESTROYED - MAY 2004		
MW-14A	05/01/1992 **	--	--	--	--	--
MW-14A	09/01/1992 **	--	--	--	--	--
MW-14A	11/01/1992 **	--	--	--	--	--
MW-14A	05/01/1993 **	--	--	--	--	--
MW-14A	08/01/1993 **	--	--	--	--	--
MW-14A	11/01/1993 **	--	--	--	--	--
MW-14A	06/01/1994 **	--	--	--	--	--
MW-14A	08/01/1994 **	--	--	--	--	--

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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-14A	08/02/2001 *	--	--	--	--	--
MW-14A	09/21/2001	--	--	--	--	--
MW-14A	05/01/2004			DESTROYED - MAY 2004		
MW-14B	09/01/1992 **	--	--	--	--	--
MW-14B	08/01/1993 **	--	--	--	--	--
MW-14B	08/02/2001 *	--	--	--	--	--
MW-14B	09/21/2001	--	--	--	--	--
MW-14B	05/01/2004			DESTROYED - MAY 2004		
MW-15	09/01/1992 **	--	--	--	--	--
MW-15	11/01/1992 **	--	--	--	--	--
MW-15	05/01/1993 **	--	--	--	--	--
MW-15	08/01/1993 **	--	--	--	--	--
MW-15	11/01/1993 **	--	--	--	--	--
MW-15	03/01/1994 **	--	--	--	--	--
MW-15	06/01/1994 **	--	--	--	--	--
MW-15	08/01/1994	--	--	--	--	--
MW-15	12/22/1994	--	--	--	--	--
MW-15	03/31/1995	--	--	--	--	--
MW-15	06/20/1995	--	--	--	--	--
MW-15	08/23/1995	--	--	--	--	--
MW-15	11/16/1995	--	--	--	--	--
MW-15	01/30/1996	--	--	--	--	--
MW-15	06/02/1996	--	--	--	--	--
MW-15	08/26/1996	--	--	--	--	--
MW-15	10/16/1996	--	--	--	--	--
MW-15	04/28/1997	--	--	--	--	--
MW-15	09/10/1997	--	--	--	--	--
MW-15	04/19/1998	--	--	--	--	--

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Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-15	09/23/1998	--	--	--	--	--
MW-15	04/28/1999	--	--	--	--	--
MW-15	10/13/1999	--	--	--	--	--
MW-15	05/19/2000	--	--	--	--	--
MW-15	09/27/2000	--	--	--	--	--
MW-15	05/05/2001	--	--	--	--	--
MW-15	10/20/2001	--	--	--	--	--
MW-15	05/01/2002	--	--	--	--	--
MW-15	09/20/2002	--	--	--	--	--
MW-15	05/20/2003 *	--	--	--	--	--
MW-15	10/02/2003	--	--	--	--	--
MW-15	06/01/2004	--	--	--	--	--
MW-15	09/21/2004 *	--	--	--	--	--
MW-15	05/12/2005	--	--	--	--	--
MW-15	09/19/2005	--	--	--	--	--
MW-15	05/08/2006	--	--	--	--	--
MW-16	08/02/2001 *	--	--	--	--	--
MW-16	10/02/2001	--	--	--	--	--
MW-16	05/01/2002	--	--	--	--	--
MW-16	09/20/2002	--	--	--	--	--
MW-16	05/20/2003 *	--	--	--	--	--
MW-16	10/02/2003	--	--	--	--	--
MW-16	06/01/2004	--	--	--	--	--
MW-16	09/21/2004 *	--	--	--	--	--
MW-16	05/12/2005	--	--	--	--	--
MW-16	09/19/2005	--	--	--	--	--
MW-16	05/08/2006	--	--	--	--	--
MW-16	09/24/2006	--	--	--	--	--
MW-16	05/14/2007	--	--	--	--	--

Table 4

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Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-16	09/12/2007	--	--	--	--	--
MW-16	05/01/2008	<0.005	<b>0.0346</b>	<b>0.197</b>	<b>0.102</b>	<0.005
MW-16	05/14/2009	FENCED, CANNOT BE ACCESSED				
MW-17	08/02/2001 *	--	--	--	--	--
MW-17	10/02/2001	--	--	--	--	--
MW-17	05/01/2002	--	--	--	--	--
MW-17	09/20/2002	--	--	--	--	--
MW-17	05/20/2003 *	--	--	--	--	--
MW-17	10/02/2003	--	--	--	--	--
MW-17	06/01/2004	--	--	--	--	--
MW-17	09/21/2004 *	--	--	--	--	--
MW-17	05/12/2005	--	--	--	--	--
MW-17	09/19/2005	--	--	--	--	--
MW-17	05/08/2006	--	--	--	--	--
MW-17	09/24/2006	--	--	--	--	--
MW-17	05/14/2007	--	--	--	--	--
MW-17	09/21/2007	--	--	--	--	--
MW-17	05/01/2008	<0.005	<0.005	<0.005	<0.07	<0.005
MW-17	05/14/2009	FENCED, CANNOT BE ACCESSED				
MW-18	08/02/2001 *	--	--	--	--	--
MW-18	10/02/2001	--	--	--	--	--
MW-18	05/01/2002	--	--	--	--	--
MW-18	09/20/2002	--	--	--	--	--
MW-18	05/20/2003 *	--	--	--	--	--
MW-18	10/02/2003	--	--	--	--	--
MW-18	06/01/2004	--	--	--	--	--
MW-18	09/21/2004 *	--	--	--	--	--
MW-18	05/12/2005	--	--	--	--	--

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
MW-18	09/19/2005	--	--	--	--	--
MW-18	05/08/2006	--	--	--	--	--
Trip Blank	01/30/1996	--	--	--	--	--
Trip Blank	06/02/1996	--	--	--	--	--
Trip Blank	08/26/1996	--	--	--	--	--
Trip Blank	10/16/1996	--	--	--	--	--
Trip Blank	04/28/1997	--	--	--	--	--
Trip Blank	09/10/1997	--	--	--	--	--
Trip Blank	04/19/1998	--	--	--	--	--
Trip Blank	09/23/1998	--	--	--	--	--
Trip Blank	04/28/1999	--	--	--	--	--
Trip Blank	10/13/1999	--	--	--	--	--
Trip Blank	09/27/2000	--	--	--	--	--
Trip Blank	05/05/2001	--	--	--	--	--
Trip Blank	10/02/2001	--	--	--	--	--
Trip Blank	05/01/2002	--	--	--	--	--
Trip Blank	09/20/2002	--	--	--	--	--
Trip Blank	05/20/2003 *	--	--	--	--	--
Trip Blank	10/02/2003	--	--	--	--	--
Trip Blank	06/01/2004	--	--	--	--	--
Trip Blank	09/21/2004 *	--	--	--	--	--
Trip Blank	05/12/2005	--	--	--	--	--
Trip Blank	09/19/2005	--	--	--	--	--
Trip Blank	05/08/2006	--	--	--	--	--
Trip Blank	09/24/2006	--	--	--	--	--
Trip Blank	05/14/2007	--	--	--	--	--
Trip Blank	09/21/2007	--	--	--	--	--
Trip Blank	05/01/2008	<0.005	<0.005	<0.005	<0.07	<0.005
Trip Blank	07/15/2008	<0.005	<0.005	<0.005	<0.07	<0.005

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Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane mg/L	TCE mg/L	PCE mg/L	cis-1,2-Dichloroethene mg/L	Methylene chloride mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>
Trip Blank	04/30/2009	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	08/19/2009	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	04/20/2010	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	06/10/2010	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	08/27/2010	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	05/24/2011	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	07/26/2011	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	11/10/2011	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	06/20/2012	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	11/05/2012	<0.0005	<0.001	<0.0008	<0.0008	<0.002
Trip Blank	04/30/2013	<0.00037	<0.000083	<0.00013	<0.000085	<0.002
Trip Blank	11/08/2013	<0.00022	<0.00012	<0.00029	<0.00023	<0.0020
Trip Blank	04/28/2014	<0.00013	<0.000091	<0.00016	<0.00013	<0.0020
Trip Blank	11/07/2014	<0.00013	<0.000091	<0.00016	<0.00013	<0.0020
Trip Blank	04/21/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	11/01/2016	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	05/01/2017	<0.0005	<0.0005	<0.0005	<0.0005	<0.002
Trip Blank	4/27/2018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blank	10/18/2018	<0.002	<0.0002	<0.0002	<0.0002	<0.0002
Tudor Motel	09/21/2007	<0.005	<0.0001	<0.0001	<0.0001	<0.0005
Tudor Motel	05/01/2008	<0.005	<0.005	<0.005	<0.07	<0.0005
Tudor Motel	07/15/2008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005

Table 4

**Historical Additional VOC Analytical Results  
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska**

Location	Date	HVOC				
		1,2-Dichloroethane	TCE	PCE	cis-1,2-Dichloroethene	Methylene chloride
		mg/L	mg/L	mg/L	mg/L	mg/L
<b>ADEC Groundwater Cleanup Levels</b>		<b>0.0017</b>	<b>0.0028</b>	<b>0.041</b>	<b>0.036</b>	<b>0.11</b>

**Notes and Abbreviations**

HVOC = Halogenated Volatile Organic Compounds by EPA Method 524.2 or SW-846 8260B

TCE = trichloroethylene

PCE = tetrachloroethylene

ADEC = Alaska Department of Environmental Conservation

<sup>a</sup> = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)

**BOLD** = Indicates concentration above the ADEC Table C Groundwater Cleanup Level

mg/L = milligrams per liter

J = Estimated value

- = Not measured / not analyzed

<x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

HS = collected via hydrasleeve

\* = Sample date defaulted to first date listed in historical data table

\*\* = Sample date accurate to month and year only



# Appendix A

## Site Photographs



Photo 1.  
View of Site facing east.



Photo 2.  
View of Site facing north.



Photo 3.  
View of Site facing north.



FORMER CHEVRON-BRANDED SERVICE STATION 97324  
4417 LAKE OTIS PARKWAY  
ANCHORAGE, ALASKA

## SITE PHOTOGRAPHS

612061-95  
Dec 9, 2016



4. View of Site facing northwest.



5. View of Site facing south.



6. View of Site facing south.



7. View of Site facing south.



FORMER CHEVRON-BRANDED SERVICE STATION 97324  
4417 LAKE OTIS PARKWAY  
ANCHORAGE, ALASKA

SITE PHOTOGRAPHS

612061-95  
Dec 9, 2016

# Appendix B

## Human Health Conceptual Site Model Scoping and Graphics Forms

## Human Health Conceptual Site Model Scoping Form

**Site Name:** Chevron - 97324  
**File Number:** 2100.26.008  
**Completed by:** GHD Services, Inc.

### Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, a CSM graphic and text must be submitted with the site characterization work plan.

*General Instructions: Follow the italicized instructions in each section below.*

### 1. General Information:

**Sources** (*check potential sources at the site*)

- |                                                                   |                                       |
|-------------------------------------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> USTs                          | <input type="checkbox"/> Vehicles     |
| <input type="checkbox"/> ASTs                                     | <input type="checkbox"/> Landfills    |
| <input checked="" type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input type="checkbox"/> Drums                                    | <input type="checkbox"/> Other: _____ |

**Release Mechanisms** (*check potential release mechanisms at the site*)

- |                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| <input type="checkbox"/> Spills           | <input type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning          |
|                                           | <input type="checkbox"/> Other: _____     |

**Impacted Media** (*check potentially-impacted media at the site*)

- |                                                                   |                                                 |
|-------------------------------------------------------------------|-------------------------------------------------|
| <input type="checkbox"/> Surface soil (0-2 feet bgs*)             | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface Soil (>2 feet bgs) | <input type="checkbox"/> Surface water          |
| <input checked="" type="checkbox"/> Air                           | <input type="checkbox"/> Other: _____           |

**Receptors** (*check receptors that could be affected by contamination at the site*)

- |                                                                           |                                                       |
|---------------------------------------------------------------------------|-------------------------------------------------------|
| <input checked="" type="checkbox"/> Residents (adult or child)            | <input checked="" type="checkbox"/> Site visitor      |
| <input checked="" type="checkbox"/> Commercial or industrial worker       | <input checked="" type="checkbox"/> Trespasser        |
| <input checked="" type="checkbox"/> Construction worker                   | <input checked="" type="checkbox"/> Recreational user |
| <input type="checkbox"/> Subsistence harvester (i.e., gathers wild foods) | <input type="checkbox"/> Farmer                       |
| <input type="checkbox"/> Subsistence consumer (i.e., eats wild foods)     | <input type="checkbox"/> Other: _____                 |

\* bgs – below ground surface

**2. Exposure Pathways:** (The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)

**a) Direct Contact –**

**1 Incidental Soil Ingestion**

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

If both boxes are checked, label this pathway complete: Complete

**2 Dermal Absorption of Contaminants from Soil**

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Can the soil contaminants permeate the skin? (Contaminants listed below, or within the groups listed below, should be evaluated for dermal absorption).

- |                                |                   |
|--------------------------------|-------------------|
| Arsenic                        | Lindane           |
| Cadmium                        | PAHs              |
| Chlordane                      | Pentachlorophenol |
| 2,4-dichlorophenoxyacetic acid | PCBs              |
| Dioxins                        | SVOCs             |
| DDT                            |                   |

If all of the boxes are checked, label this pathway complete: Incomplete

**b) Ingestion –**

**1 Ingestion of Groundwater**

Have contaminants been detected or are they expected to be detected in the groundwater, OR are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? *Please note, only leave the box unchecked if ADEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.*

If both the boxes are checked, label this pathway complete: Complete

## 2 Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water OR are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? *Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).*

If both boxes are checked, label this pathway complete: Incomplete

## 3 Ingestion of Wild Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild food?

Do the site contaminants have the potential to bioaccumulate (*see Appendix A*)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that **could** be connected to surface water, etc.)

If all of the boxes are checked, label this pathway complete: Incomplete

## c) Inhalation

### 1 Inhalation of Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Are the contaminants in soil volatile (*See Appendix B*)?

If all of the boxes are checked, label this pathway complete: Complete

### 2 Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, or subject to "preferential pathways" that promote easy airflow, like utility conduits or rock fractures)

Are volatile compounds present in soil or groundwater (*See Appendix C*)?

If both boxes are checked, label this pathway complete: Incomplete

**3. Additional Exposure Pathways:** (Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- o Climate permits recreational use of waters for swimming,
- o Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- o Groundwater or surface water is used for household purposes.

Check the box if further evaluation of this pathway is needed:

Comments:

**Inhalation of Volatile Compounds in Household Water**

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- o The contaminated water is used for household purposes such as showering, laundering, and dish washing, and
- o The contaminants of concern are volatile (common volatile contaminants are listed in Appendix B)

Check the box if further evaluation of this pathway is needed:

Comments:

**Inhalation of Fugitive Dust**

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

Check the box if further evaluation of this pathway is needed:



Comments:

**Direct Contact with Sediment**

This pathway involves people's hands being exposed to sediment, such as during recreational or some types of subsistence activities. People then incidentally **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

- Climate permits recreational activities around sediment, and/or
- Community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

*Check the box if further evaluation of this pathway is needed:*

Comments:

**4. Other Comments** *(Provide other comments as necessary to support the information provided in this form.)*

## APPENDIX A

### BIOACCUMULATIVE COMPOUNDS

**Table A-1: List of Compounds of Potential Concern for Bioaccumulation**

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log  $K_{ow}$  greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table X of 18 AAC 75.345 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log  $K_{ow}$  greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient ( $K_{ow}$ ) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the  $K_{ow}$  and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at <http://www.pbtprofiler.net/>. For compounds not found in the PBT Profiler, DEC recommends using a log  $K_{ow}$  greater than 3.5 to determine if a compound is bioaccumulative.

## APPENDIX B

### VOLATILE COMPOUNDS

**Table B-1: List of Volatile Compounds of Potential Concern**

Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is  $1 \times 10^{-5}$  atm-m<sup>3</sup>/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

Acenaphthene	1,4-dichlorobenzene	Pyrene
Acetone	1,1-dichloroethane	Styrene
Anthracene	1,2-dichloroethane	1,1,2,2-tetrachloroethane
Benzene	1,1-dichloroethylene	Tetrachloroethylene
Bis(2-chlorethyl)ether	Cis-1,2-dichloroethylene	Toluene
Bromodichloromethane	Trans-1,2-dichloroethylene	1,2,4-trichlorobenzene
Carbon disulfide	1,2-dichloropropane	1,1,1-trichloroethane
Carbon tetrachloride	1,3-dichloropropane	1,1,2-trichloroethane
Chlorobenzene	Ethylbenzene	Trichloroethylene
Chlorodibromomethane	Fluorene	Vinyl acetate
Chloroform	Methyl bromide	Vinyl chloride
2-chlorophenol	Methylene chloride	Xylenes
Cyanide	Naphthalene	GRO
1,2-dichlorobenzene	Nitrobenzene	DRO

## APPENDIX C

## COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

**Table C-1: List of Compounds of Potential Concern for the Vapor Migration**

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than  $10^{-6}$  or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if it's Henry's Law constant is  $1 \times 10^{-5}$  atm-m<sup>3</sup>/mol or greater.

Acenaphthene	Dibenzofuran	Hexachlorobenzene
Acetaldehyde	1,2-Dibromo-3-chloropropane	Hexachlorocyclopentadiene
Acetone	1,2-Dibromoethane (EDB)	Hexachloroethane
Acetonitrile	1,3-Dichlorobenzene	Hexane
Acetophenone	1,2-Dichlorobenzene	Hydrogen cyanide
Acrolein	1,4-Dichlorobenzene	Isobutanol
Acrylonitrile	2-Nitropropane	Mercury (elemental)
Aldrin	N-Nitroso-di-n-butylamine	Methacrylonitrile
alpha-HCH (alpha-BHC)	n-Propylbenzene	Methoxychlor
Benzaldehyde	o-Nitrotoluene	Methyl acetate
Benzene	o-Xylene	Methyl acrylate
Benzo(b)fluoranthene	p-Xylene	Methyl bromide
Benzylchloride	Pyrene	Methyl chloride (chloromethane)
beta-Chloronaphthalene	sec-Butylbenzene	Methylcyclohexane
Biphenyl	Styrene	Methylene bromide
Bis(2-chloroethyl)ether	tert-Butylbenzene	Methylene chloride
Bis(2-chloroisopropyl)ether	1,1,1,2-Tetrachloroethane	Methylethylketone (2-butanone)
Bis(chloromethyl)ether	1,1,2,2-Tetrachloroethane	Methylisobutylketone
Bromodichloromethane	Tetrachloroethylene	Methylmethacrylate
Bromoform	Dichlorodifluoromethane	2-Methylnaphthalene
1,3-Butadiene	1,1-Dichloroethane	MTBE
Carbon disulfide	1,2-Dichloroethane	m-Xylene
Carbon tetrachloride	1,1-Dichloroethylene	Naphthalene
Chlordane	1,2-Dichloropropane	n-Butylbenzene
2-Chloro-1,3-butadiene (chloroprene)	1,3-Dichloropropene	Nitrobenzene
Chlorobenzene	Dieldrin	Toluene
1-Chlorobutane	Endosulfan	trans-1,2-Dichloroethylene
Chlorodibromomethane	Epichlorohydrin	1,1,2-Trichloro-1,2,2-trifluoroethane
Chlorodifluoromethane	Ethyl ether	1,2,4-Trichlorobenzene
Chloroethane (ethyl chloride)	Ethylacetate	1,1,2-Trichloroethane
Chloroform	Ethylbenzene	1,1,1-Trichloroethane
2-Chlorophenol	Ethylene oxide	Trichloroethylene
2-Chloropropane	Ethylmethacrylate	Trichlorofluoromethane
Chrysene	Fluorene	1,2,3-Trichloropropane
cis-1,2-Dichloroethylene	Furan	1,2,4-Trimethylbenzene
Crotonaldehyde (2-butenal)	Gamma-HCH (Lindane)	1,3,5-Trimethylbenzene
Cumene	Heptachlor	Vinyl acetate
DDE	Hexachloro-1,3-butadiene	Vinyl chloride (chloroethene)

Source: EPA 2002.

Guidance on Developing Conceptual Site Models  
January 31, 2005

# HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Chevron 97324  
 File ID: 2100.026.008

Completed By: GHD Services, Inc.  
 Date Completed: 6/13/17

**Instructions:** Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Media	(2) Transport Mechanisms
<input type="checkbox"/> Surface Soil (0-2 ft bgs)	<input type="checkbox"/> Direct release to surface soil <i>check soil</i> <input type="checkbox"/> Migration to subsurface <i>check soil</i> <input type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Runoff or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input checked="" type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input checked="" type="checkbox"/> Direct release to subsurface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input type="checkbox"/> Groundwater	<input type="checkbox"/> Direct release to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Flow to surface water body <i>check surface water</i> <input type="checkbox"/> Flow to sediment <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Sedimentation <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i> <input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list):

(3) Exposure Media	(4) Exposure Pathway/Route	(5) Current & Future Receptors						
<input checked="" type="checkbox"/> soil	<input checked="" type="checkbox"/> Incidental Soil Ingestion <input type="checkbox"/> Dermal Absorption of Contaminants from Soil <input type="checkbox"/> Inhalation of Fugitive Dust	C/F	F	C/F	F			
<input checked="" type="checkbox"/> groundwater	<input checked="" type="checkbox"/> Ingestion of Groundwater <input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water	C/F	F	C/F	F			
<input checked="" type="checkbox"/> air	<input checked="" type="checkbox"/> Inhalation of Outdoor Air <input type="checkbox"/> Inhalation of Indoor Air <input type="checkbox"/> Inhalation of Fugitive Dust	C/F	F	C/F	F			
<input type="checkbox"/> surface water	<input type="checkbox"/> Ingestion of Surface Water <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
<input type="checkbox"/> sediment	<input type="checkbox"/> Direct Contact with Sediment							
<input type="checkbox"/> biota	<input type="checkbox"/> Ingestion of Wild or Farmed Foods							

Identify the receptors potentially affected by each exposure pathway. Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
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# Appendix C

## Monitoring Data Package



# DAILY FIELD REPORT

Project Name: <b>CHEV 97324</b>	GHD Project Manager: <b>S. PRITCHARD</b>	Field Rep: <b>O. VAN/T. WEAVER</b>
Project Number: <b>612061</b>	Date: <b>10/18/18</b>	Site Address: <b>4417 LAKE OTIS PKWY ANCHORAGE, AK</b>
Scope of Work: <b>GW SAMPLING → GAUGE WELLS / COLLECT GW SAMPLE</b>		Weather: <b>45°F - CLOUDS + CHANGE OF RAIN</b>
Equipment: <b>YSI-556 (0420023AF); HP-50; TURBIDITY METER (15652); WATER LEVEL METER (06784)</b>		

Time	Activity/Comments	SWA
0800	HEAD TO FEDEX TO DROP OFF SAMPLES; CALIBRATED EQUIPMENT @ 740	
0815	HEAD TO SITE	
0838	ARRIVE ONSITE; CONDUCT TAILGATE; NOTIFY PM.	
0855	START GAUGING WELLS.	
0912	SET UP @ MW-9 LOCATION	
0917	START LF PURGE SAMPLING @ MW-9; COLLECT GW PARAMETER READINGS.	
0948	COLLECT MW-9-W-18108 GW SAMPLE; DECON EQUIPMENT; PURGE 0.8 GAL THROUGH GAC	
1002	SET UP @ WELL MW-8R, T.W. PERFOM; SITE LANDSCAPE → CUT OVERGROWN PLANTS/GRASS	
1007	START LF PURGE SAMPLING OF MW-8R; COLLECT GW PARAMETER READINGS	
1030	COLLECT MW-8R GW SAMPLE; DECON EQUIPMENT; PURGE 0.65 GAL THROUGH GAC	
1042	SET UP ON WELL MW-1R	
1050	START LF-PURGE SAMPLING OF WELL MW-2R; COLLECT GW PARAMETER READINGS.	
1121	COLLECT MW-1R-W-18108 GW SAMPLE; DECON EQUIPMENT; PURGE 0.8 GAL THROUGH GAC	
1132	BRK FOR LUNCH; PICK UP SUPPLIES AT OFFICE	
1207	BACK ONSITE; START SETTING UP.	
1211	SET UP ON WELL MW-2R	
1215	START LF-PURGE SAMPLING OF WELL MW-2R; COLLECT GW PARAMETER READINGS.	
1247	COLLECT MW-2R-W-18109 / DUP-1-W-18108 GW SAMPLES; DECON EQUIPMENT; PURGE 0.35 GAL THROUGH GAC	
1258	START SITE CLEANUP → PURGE 2.5 GAL OF DECON WATER THROUGH GAC; PACK SAMPLES	
1307	T.W. RESTART COMPUTER FOR THE AS/OVE SYSTEM - SYSTEM RUNNING.	
1310	HEAD TO FEDEX TO DROP OFF SAMPLES	
1322	DROP OFF SAMPLES AT FEDEX; HEAD TO TTT TO DROP OFF EQUIP @ 1326	
1340	DROPPED OFF EQUIPMENT	
	TOTAL PURGED THROUGH GAC = 5.5 GAL	

*[Handwritten Signature]*

SWA Key:	A: Person or People	B: Equipment	C: Environmental
	D: Procedures/Processes/JSA-review/revise	E: Visitors	

Operational Mileage: Start        End        Total       

Site Photographs:  GAC Tracker:  Disposal Log: N/A Lab COC Review:







# Groundwater Sampling Form

Project No. 612061 PM Siobhan Pritchard Well ID MW-1R Date 10/18/18 Page 1 of 4

Site ID / Location 97324 / 4417 Lake Otis Parkway, Anchorage, Alaska (ADEC 2100.26.008)

Screen Casing Well Material x PVC Sampled by T. Weaver  
 Setting (ft-btoc) 18 Diameter (in.) 2" SS O. Yan

Static Water Level (ft-btoc) 23.80 Total Depth (ft-btoc) 30.96 Water Column / Gallons in Well 7.16 / 1.146

Sample ID MW-1R-W-18 1018

Dup ID ---

Sample Time 1121 Start --- End ---

<b>No-Purge Method</b> Sampler Length (in) <u>36</u> <input type="checkbox"/> Depth of Sample <u>---</u> <u>30</u> <input type="checkbox"/> <b>Low-Flow Sampling</b> Weights <u>---</u> Position <u>---</u> Suspended <input type="checkbox"/> Bottom <input type="checkbox"/> Bottom set <input type="checkbox"/> Was 1 gallon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input type="checkbox"/>				<b>Low Flow Method</b> Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>24.40</u> Volumes Purged <u>0.8 GAL</u> Flow rate (ml/minute) <u>110-150</u> Purge Time: Start <u>1050</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> End <u>1120</u>			
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1055	5	150	23.92	0.10	8.15	0.336	17.85	7.21	131.9	66.8	CLEAR
1100	10	110	23.83	0.15	7.65	0.334	16.58	6.92	136.4	48.1	" "
1105	15	110	23.82	0.25	7.30	0.338	16.40	6.86	139.2	32.1	" "
1110	20	110	23.82	0.35	7.23	0.341	16.04	6.83	140.4	19.5	" "
1115	25	110	23.82	0.40	7.23	0.327	16.06	6.82	141.1	13.8	" "

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> not needed for 1SA18	40 mL vial	3	
VOCs by 8260 <input checked="" type="checkbox"/> 1SA18 event only	40 mL vial + naphthalene	3	HCl
HVOCs by 8260 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
DRO by AK 102 <input checked="" type="checkbox"/>	250 mL amber	2	HCl
RRO by AK 103 <input checked="" type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input checked="" type="checkbox"/> 1SA18 event only	1L amber	2	None
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL: 11

**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	

**Field Test Results:**

Ferrous Iron	mg/L	Nitrate	mg/L	Other
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**Well Information**

Well Location: ON SITE Well Locked at Arrival: Yes / No

Condition of Well: GOOD Well Locked at Departure: Yes / No

Well Completion: Flush Mount / Stick Up

**Additional Notes**

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# Groundwater Sampling Form

Project No. 612061 PM Siobhan Pritchard Well ID MW-2R Date 10/18/18 Page 2 of 4

Site ID / Location 97324 / 4417 Lake Otis Parkway, Anchorage, Alaska (ADEC 2100.26.008)

Screen Casing Well Material x PVC Sampled by T. Weaver  
 Setting (ft-btoc) 19 Diameter (in.) 2" SS O. Yan

Static Water Level (ft-btoc) 24.53 Total Depth (ft-btoc) 31.26 Water Column / Gallons in Well 6.73 / 1.077  
 Sample ID MW-2R-W-181018  
 Dup ID DUP-1-W-181018

Sample Time 1247 Start \_\_\_\_\_ End \_\_\_\_\_

**No-Purge Method**  
 Sampler Length (in) 36  Depth of Sample \_\_\_\_\_  
30  **Low-Flow Sampling**  
 Weights \_\_\_\_\_ Position \_\_\_\_\_  
 Suspended \_\_\_\_\_   
 Bottom set \_\_\_\_\_   
 Yes  No   
 Was a deflon Baler used to collect non volatile samples \_\_\_\_\_

**Low Flow Method**  
 Pump type Bladder  Other   
 Pump Intake (ft-btoc) 25.10  
 Volumes Purged 0.75 GAL  
 Flow rate (ml/minute) 75 - 110 Purge Time: Start 1215  
 Did well Dewater? Yes  No  End 1245

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1220	5	75	24.55	0.05	8.73	0.445	18.93	7.26	152.6	17.1	CLEAR
1225	10	110	24.55	0.20	7.74	0.476	17.70	7.20	148.2	11.0	" "
1230	15	110	24.55	0.30	7.40	0.463	17.48	7.17	148.3	8.02	" "
1235	20	110	24.54	0.45	7.18	0.489	17.51	7.17	147.8	4.38	" "
1240	25	110	24.54	0.55	7.09	0.436	17.35	7.18	147.5	2.66	" "

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> <del>not needed for 16A18</del>	40 mL vial	3	HCl
VOCs by 8260 <input checked="" type="checkbox"/> <del>16A18 event only</del>	40 mL vial + naphthalene	3	HCl
HVOCs by 8260 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
DRO by AK 102 <input checked="" type="checkbox"/>	250 mL amber	2	HCl
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PHS by 8270 <input checked="" type="checkbox"/> <del>16A18 event only</del>	1L amber	2	None
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL: 11/11

**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	

**Field Test Results:** N/A Ferrous Iron \_\_\_\_\_ mg/L Nitrate \_\_\_\_\_ mg/L Other \_\_\_\_\_

**Well Information**

Well Location: ONSITE Well Locked at Arrival:  Yes  No

Condition of Well: GOOD Well Locked at Departure:  Yes  No

Well Completion:  Flush Mount /  Stick Up

**Additional Notes**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Groundwater Sampling Form

Project No. 612061 PM Siobhan Pritchard Well ID MW-8RR Date 10/18/18 Page 3 of 4

Site ID / Location 97324 / 4417 Lake Otis Parkway, Anchorage, Alaska (ADEC 2100.26.008)

Screen Casing Well Material x PVC Sampled by T. Weaver  
 Setting (ft-btoc) 18 Diameter (in.) 2" SS O. Yan

Static Water Level (ft-btoc) 22.67 Total Depth (ft-btoc) 32.56 Water Column / Gallons in Well 9.89 / 1.582 Sample ID MW-8RR-W-181018

Dup ID \_\_\_\_\_ Sample Time 1038 Start \_\_\_\_\_ End \_\_\_\_\_

**No-Purge Method**  
 Sampler Length (in) 36  Depth of Sample \_\_\_\_\_  
 Weights \_\_\_\_\_ **Low-Flow Sampling**  
 Position \_\_\_\_\_ Suspended   
 Bottom set   
 Yes  No   
 Wash Refill Baler used to collect non volatile samples

**Low Flow Method**  
 Pump type Bladder  Other   
 Pump Intake (ft-btoc) 23.30  
 Volumes Purged 0.65 GAL  
 Flow rate (ml/minute) 105 Purge Time: Start 1007 End 1037  
 Did well Dewater? Yes  No

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
1012	5	105	22.71	0.05	8.93	0.721	16.61	7.60	155.9	69.9	CLEAR
1017	10	105	22.72	0.15	8.15	0.763	16.08	7.63	151.5	46.8	" "
1022	15	105	22.72	0.35	7.70	0.765	15.97	7.58	151.3	25.0	" "
1027	20	105	22.72	0.50	7.40	0.786	15.74	7.55	148.9	11.6	" "
1032	25	105	22.72	0.65	7.31	0.761	15.66	7.55	146.5	4.46	" "

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> not needed for 1SA18	40 mL vial	3	
<del>VOCs by 8260 <input checked="" type="checkbox"/> 1SA18 event only</del>	<del>40 mL vial + naphthalene</del>	<del>3</del>	<del>HCl</del>
HVOCs by 8260 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
GRO by AK 101 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
DRO by AK 102 <input checked="" type="checkbox"/>	250 mL amber	2	HCl
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
<del>PAHs by 8270 <input checked="" type="checkbox"/> 1SA18 event only</del>	<del>1L amber</del>	<del>2</del>	<del>None</del>
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			
		<b>TOTAL: 11</b>	

**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	

**Field Test Results:** N/A Ferrous Iron \_\_\_\_\_ mg/L Nitrate \_\_\_\_\_ mg/L Other \_\_\_\_\_

**Well Information**  
 Well Location: ONSITE Well Locked at Arrival: Yes / No  
 Condition of Well: Good Well Locked at Departure: Yes / No  
 Well Completion: Flush Mount / Stick Up

**Additional Notes**  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# Groundwater Sampling Form

Project No. 612061    PM Siobhan Pritchard    Well ID MW-9    Date 10/19/18    Page 4 of 4

Site ID / Location 97324 / 4417 Lake Otis Parkway, Anchorage, Alaska (ADEC 2100.26.008)  
 Screen Casing    Well Material x PVC    Sampled by T. Weaver  
 Setting (ft-btoc) 8    Diameter (in.) 2"    SS    O. Yan

Static Water Level (ft-btoc) 15.44    Total Depth (ft-btoc) 19.29    Water Column / Gallons in Well 3.85 / 0.616  
 Sample ID MW-9-W-181018  
 Dup ID \_\_\_\_\_  
 Sample Time 0948    Start \_\_\_\_\_    End \_\_\_\_\_

<b>No-Purge Method</b> Sampler Length (in) <u>36</u> <input type="checkbox"/> Depth of Sample _____ Weights _____ Position _____ Suspended <input type="checkbox"/> Bottom set <input type="checkbox"/> Was neylon Baler used to collect non volatile samples Yes <input type="checkbox"/> No <input type="checkbox"/>				<b>Low Flow Method</b> Pump type Bladder <input checked="" type="checkbox"/> Other <input type="checkbox"/> Pump Intake (ft-btoc) <u>16.00</u> Volumes Purged <u>0.80 GAL</u> Flow rate (ml/minute) <u>105-155</u> Purge Time: Start <u>0917</u> End <u>0947</u> Did well Dewater? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--

Time	Minutes Elapsed	Rate (gpm) (mL/min)	Depth to Water (ft)	Gallons Purged	Temp (°C)	Cond. (mS/cm) 3%	Dissolved Oxygen (mg/L) 10%	pH 0.1	Redox (mV) 10	Turbidity (NTU)	Additional notes
0922	5	155	15.45	0.05	9.07	0.278	12.36	5.54	206.4	8.80	CLEAR
0927	10	105	15.45	0.25	7.89	0.267	11.33	5.64	192.8	7.27	" "
0932	15	105	15.45	0.40	7.36	0.263	10.51	5.81	177.7	4.06	" "
0937	20	105	15.45	0.50	7.02	0.262	9.77	5.94	170.1	3.57	" "
0942	25	105	15.45	0.65	6.89	0.263	9.28	6.07	166.5	3.25	" "

Constituents Sampled	Container	Number	Preservative
BTEX by 8260 <input checked="" type="checkbox"/> not needed for 1SA18	40 mL vial	3	
VOCs by 8260 <input checked="" type="checkbox"/> 1SA18 event only	40 mL vial naphthalene	3	HCl
HVOCs by 8260 <input checked="" type="checkbox"/>	40 mL vial	3	HCl
GRO by AK 101 <input type="checkbox"/>			
DRO by AK 102 <input type="checkbox"/>			
RRO by AK 103 <input type="checkbox"/>			
Lead by 6010 <input type="checkbox"/>			
PAHs by 8270 <input checked="" type="checkbox"/> 1SA18 event only	1L amber	2	None
Alkalinity by 2320B <input type="checkbox"/>			
Methane by RSK175 <input type="checkbox"/>			
Sulfate by EPA 300 <input type="checkbox"/>			
Nitrate/Nitrite by EPA 300 <input type="checkbox"/>			
Ferrous Iron <input type="checkbox"/>			

TOTAL: 6

**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	

**Field Test Results:**  
 N/A    Ferrous Iron \_\_\_\_\_ mg/L    Nitrate \_\_\_\_\_ mg/L    Other \_\_\_\_\_

**Well Information**

Well Location: ONSITE - UPGRADIENT    Well Locked at Arrival: Yes / No  
 Condition of Well: GOOD    Well Locked at Departure: Yes / No  
 Well Completion: Flush Mount / Stick Up

**Additional Notes**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Field Data Record Form**  
**Meter, PH/Cond./Temp./DO/ORP/ Salinity/Flow Cell,**  
**YSI 556 MPS**  
**(QSF-483D)**

Page 1 of 1

Control number: 04D8023AF (TTT RENTAL) Project number: 612061  
 Date (mm/dd/yyyy): 10/10/10 Project name: CENIC 97329  
 User (print name): YAN, OLIVER Location: 4417 LAKE OTIS PKWY  
ANCHORAGE, AK

Calibration solution(s):	PH 7.0	PH 4.0	CONDUCTIVITY	ORP
Lot #(s):	<u>WX1-00654-09</u>	<u>WX1-00654-00</u>	<u>WX1-00653-18</u>	<u>8059</u>
Supplier(s):	<u>OAKTON</u>	<u>OAKTON</u>	<u>OAKTON</u>	<u>HANNA</u>
Expiration date(s):	<u>03/20</u>	<u>03/20</u>	<u>03/20</u>	<u>06/2023</u>

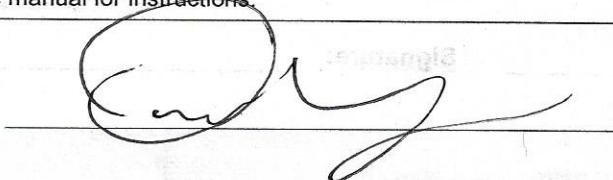
Additional information: \_\_\_\_\_

**Field procedure before use:**

	Check when completed
<ul style="list-style-type: none"> <li>Check kit contents.</li> <li>Check pH 7 buffer reading. Calibrate if greater than <math>\pm 0.2</math>. PH is a two point calibration but always start with the seven standard.</li> <li>Fill calibration cup with pH 7.0 buffer and attach to probe with probes facing down.</li> <li>Press Esc to enter into main menu and use down arrow key to highlight calibration menu. Press <math>\downarrow</math> key to accept.</li> <li>Use <math>\downarrow</math> key to highlight pH symbol and press enter <math>\downarrow</math>.</li> <li>Select 2 point calibration and use number pad to enter 7.0 and push <math>\downarrow</math> to accept value. Push <math>\downarrow</math> again to calibrate.</li> <li>Repeat these steps to calibrate your pH value to 4.0 or 10.0.</li> <li>Press Esc to return to the calibration screen.</li> </ul>	<p>Reading <u>6.98</u></p> <p>Calibrated Y <input checked="" type="radio"/> N</p>
<ul style="list-style-type: none"> <li>Check conductivity standard near the expected range. Calibrate if greater than <math>\pm 0.5\%</math>. Conductivity is a one point calibration.</li> <li>Fill calibration cup with <u>1.413</u> mS standard and attach to probe with probes facing up.</li> <li>Press Esc to return to the calibration screen.</li> <li>Use the <math>\uparrow</math> or <math>\downarrow</math> to select SpC and press <math>\downarrow</math></li> <li>Use the number key pad to enter 1.413 and push <math>\downarrow</math> to accept value. Push <math>\downarrow</math> again to calibrate.</li> </ul>	<p>Standard <u>1.413</u></p> <p>Reading <u>1.414</u></p> <p>Calibrated <input checked="" type="radio"/> Y / N</p>
<ul style="list-style-type: none"> <li>Check ORP standard:</li> <li>Press Esc to return to the calibration screen.</li> <li>Use the <math>\uparrow</math> or <math>\downarrow</math> to select ORP and press <math>\downarrow</math></li> <li>Use the number key pad to enter the value and push <math>\downarrow</math> to accept. Push <math>\downarrow</math> again to calibrate.</li> </ul>	<p>Standard <u>240</u> mV</p> <p>Reading <u>240.3</u> mV</p>
<ul style="list-style-type: none"> <li>To calibrate DO, see manual for instructions.</li> </ul>	<p>Calibrated <input checked="" type="radio"/> Y / N</p>

Filing: Field file

Signature: \_\_\_\_\_



**Field Data Record Form**  
**Meter, Turbidity (Portable), HF Scientific**  
**(QSF-249D)**

Control number: 15652 (TTT RENTAL)  
 Date (mm/dd/yyyy): 10/17/18  
 User (print name): YAN, OLIVER

Project number: 612061  
 Project name: CENC 4732A

Location: 4417 LAKE OTIS PKWY  
ANCHORAGE, AK

**Additional equipment control numbers and descriptions:**

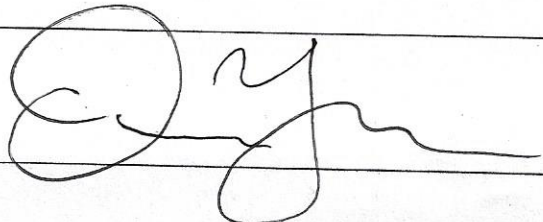
NTU =	<0.02	20	100	800
Lot =	A8193	A8206	A8199	A8206
Exp =	OCT-19	NOV-19	NOV-19	NOV-19

**Field procedure before use:**

	Check when completed
<ul style="list-style-type: none"> <li>• Turn the DRT-15CE to the 0-10 range.</li> <li>• Check outside of reference standard bottles for cleanliness, no condensation, surface scratches, or finger smudges.</li> <li>• Insert the reference standard and index.</li> <li>• Adjust the Reference Adjust in the appropriate direction to cause the display to read 0.02 NTU.</li> <li>• The unity is now ready to use on any range.</li> </ul>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
<p>Note: Condensation, surface scratches, finger smudges, and dirt on outside of sample bottles affects meter readings.</p>	

Filing: Field file

Signature: \_\_\_\_\_



**Field Data Record Form  
Meter, Water Level  
(QSF-251D)**

Page 1 of 1

Control number: 06724  
Date (mm/dd/yyyy): 10/17/18  
User (print name): YAN, OLIVER

Project number: 012001  
Project name: CENC 9734

Location: 4417 LAKE OTIS PKWY,  
ANCHORAGE, AK

Additional equipment control numbers and descriptions: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Field procedure before use:**

	Check when completed
<ul style="list-style-type: none"><li>• Check for broken or missing parts.</li><li>• Check battery</li><li>• Check operation of buzzer.</li><li>• Check operation of signal light.</li><li>• Test probe in water to ensure unit operates, both visually and audibly.</li><li>• Check cable.</li></ul>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

Filing: Field file

Signature: \_\_\_\_\_





# Portable GAC Volume Tracking Log

Site ID	Project No.	Date	Volume Filtered through GAC (gallons)	Filter location description
92609	620911	6/11/18	6.35 GAL	CENTER OF SITE IN THE VICINITY OF MW-3/MW-9 PLANTER AREA
92609	620911	6/12/18	4.35 GAL	" "
95414	062327	6/18/18	5.10 GAL	PURGED THROUGH PLANTER MAR MW3/MW-2. AT CENTER OF SITE
95414	062327	6/19/18	6.30 GAL	PLANTER UPGRADIENT OF MW10, PLANTER/SIDE OF SITE, EAST OF MW5.
351860	065008	6/19/18	5.50 GAL	PLANTER WESTERN SIDE OF SITE.
357860	065004	6/20/18	6.10 GAL	SOUTH WEST SIDE OF SITE
211078	622233	7/12/18	4.20 GAL	CENTER OF SITE
95414	062327	08/08/18	4.10 GAL	PURGE WATER THROUGH GAC AT PLANTER AREA BETWEEN CHEVRON/ARCTIC ROAD RUNNING
95414	062327	08/08/18	3.40 GAL	↓
306447	082676	08/09/18	4.40 GAL	PLANTER BETWEEN SITE (UPGRADIENT).
211081	062324	08/20/18	0.9 GAL	PLANTER NE OF STATION
211079	065003	08/20/18	5.15 GAL	FENCED AREA BEHIND MARKET
211083	065004	08/21/18	12.1 GAL	GRASS SW OF ALSTATE
211079	065003	9/22/18	4.2 GAL	FENCED AREA BEHIND MARKET
91518	062325	9/28/18	6.1 GAL	PLANTER SOUTH OF WENDY'S
90430	065001	8/29/18	8.1 GAL	CENTER OF THE SITE (BETWEEN MW-7/MW-5K)
92555	062326	8/30/18	6.7 GAL	PLANTER ALONG 9TH AVENUE, FIX IT SITE
92555	062326	8/31/18	6.75 GAL	PLANTER CENTER AND CENTER OF SITE.
91252	622059	9/4/18	11 GAL	PLANTER EAST OF SITE (UPGRADIENT) BY STATION SIGN.
91356	622232	9/5/18	6.8 GAL	PLANTER AREA BY THE CHEVRON STATION BY STATION BUILDING
306451	621048	9/6/18	3.5 GAL	SOUTH OF STATION BUILDING
92609	620911	9/10/18	4.75 GAL	CENTER OF SITE;
92609	620911	9/11/18	5.45 GAL	CENTER OF SITE;
96097	062328	9/13/18	6.5 GAL	CENTER OF SITE → PLANTER IN BETWEEN RILEY'S AND SITE
96097	062328	9/14/18	5.6 GAL	CENTER OF SITE → PLANTER IN BETWEEN RILEY'S AND SITE
98557	060361	9/25/18	14.4 GAL	PLANTER AREA BY STATION BUILDING
99014	062329	9/26/18	8.9 GAL	PLANTER BY CHEVRON STATION SIGN
99014	062329	9/27/18	9.0 GAL	PLANTER BY THURFIS PROPERTY, ALONG BUILDING
99014	062329	9/28/18	6.5 GAL	PLANTER BY THURFIS PROPERTY, ALONG BUILDING
211074	612064	10/5/18	5.7 GAL	GRASS SOUTH OF DP-40
211074	612064	10/6/18	10.35 GAL	GRASS SOUTH OF DP-40
306448	621049	10/10/18	4.8 GAL	CENTER OF SITE
95799	620914	10/16/18	6.65 GAL	VARIOUS → PLANTER AREAS ONSITE.
96489	620914	10/17/18	7.3 GAL	ONSITE → PLANTER NEXT TO STATION BUILDING.
97324	612061	10/18/18	5.5 GAL	ONSITE BY SYSTEM BUILDING.



# Appendix D

## Laboratory Analytical Report



## ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

ChevronTexaco  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

Report Date: November 08, 2018 12:50

**Project: 97324**

Account #: 10880  
Group Number: 2000886  
PO Number: 0015276760  
Release Number: HETRICK  
State of Sample Origin: AK

Electronic Copy To Chevron  
Electronic Copy To GHD  
Electronic Copy To GHD  
Electronic Copy To GHD  
Electronic Copy To GHD

Attn: GHD EDD  
Attn: Jeffrey Cloud  
Attn: Sarah Gillette  
Attn: Siobhan Pritchard  
Attn: GHD EDF

Respectfully Submitted,



Megan A. Moeller  
Senior Specialist

(717) 556-7261

To view our laboratory's current scopes of accreditation please go to <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. Historical copies may be requested through your project manager.



### SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW-9-W-181018 Grab Groundwater	10/18/2018 09:48	9862511
MW-8RR-W-181018 Grab Groundwater	10/18/2018 10:38	9862512
MW-1R-W-181018 Grab Groundwater	10/18/2018 11:21	9862513
MW-2R-W-181018 Grab Groundwater	10/18/2018 12:47	9862514
DUP-1-W-181018 Grab Groundwater	10/18/2018	9862515
QA-1-W-181018 Water	10/18/2018	9862516

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: 97324  
ELLE Group #: 2000886

**General Comments:**

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

**Analysis Specific Comments:**

No additional comments are necessary.

**Sample Description:** MW-9-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862511  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submission Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 09:48

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>		<b>SW-846 8260B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	0.064	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	0.0003 J	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	0.082	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	0.022	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	N.D.	0.0005	0.002	1
10335	o-Xylene	95-47-6	N.D.	0.0003	0.001	1

### Sample Comments

State of Alaska Lab Certification No. UST-061

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-9-W-181018 Grab Groundwater  
 Facility# 97324  
 4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
 ELLE Sample #: WW 9862511  
 ELLE Group #: 2000886  
 Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
 Collection Date/Time: 10/18/2018 09:48

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	11/01/2018 01:31	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	11/01/2018 01:31	Don V Viray	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-8RR-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
**ELLE Sample #:** WW 9862512  
**ELLE Group #:** 2000886  
**Matrix:** Groundwater

**Project Name:** 97324

**Submission Date/Time:** 10/22/2018 09:00  
**Collection Date/Time:** 10/18/2018 10:38

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>		<b>SW-846 8260B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	0.003 J	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	0.0002 J	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	0.003	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	0.0006 J	0.0005	0.002	1
10335	o-Xylene	95-47-6	0.0003 J	0.0003	0.001	1
<b>GC Volatiles</b>		<b>AK 101</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-8RR-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862512  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 10:38

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	<b>GC Petroleum Hydrocarbons</b>	<b>AK 102-SV 4/8/02</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
13025	DRO C10-C25	n.a.	0.11 J	0.051	0.25	1

### Sample Comments

State of Alaska Lab Certification No. UST-061

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	11/01/2018 01:51	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	11/01/2018 01:51	Don V Viray	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18296C20A	10/24/2018 20:40	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	18296C20A	10/24/2018 20:40	Linda C Pape	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182970039A	10/26/2018 19:06	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182970039A	10/25/2018 07:00	Logan M Brosemer	1

\*=This limit was used in the evaluation of the final result



**Sample Description:** MW-1R-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862513  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submission Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 11:21

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
<b>SW-846 8260B</b>						
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	N.D.	0.0005	0.002	1
10335	o-Xylene	95-47-6	N.D.	0.0003	0.001	1
<b>GC Volatiles</b>			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
<b>AK 101</b>						
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-1R-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862513  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 11:21

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	<b>GC Petroleum Hydrocarbons</b>	<b>AK 102-SV 4/8/02</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
13025	DRO C10-C25	n.a.	0.069 J	0.050	0.25	1

### Sample Comments

State of Alaska Lab Certification No. UST-061

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	11/01/2018 02:12	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	11/01/2018 02:12	Don V Viray	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18296C20A	10/24/2018 18:22	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	18296C20A	10/24/2018 18:22	Linda C Pape	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182970039A	10/26/2018 19:33	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182970039A	10/25/2018 07:00	Logan M Brosemer	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-2R-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862514  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submission Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 12:47

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>		<b>SW-846 8260B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	0.003 J	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	N.D.	0.0005	0.002	1
10335	o-Xylene	95-47-6	N.D.	0.0003	0.001	1
<b>GC Volatiles</b>		<b>AK 101</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** MW-2R-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862514  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018 12:47

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	<b>GC Petroleum Hydrocarbons</b>	<b>AK 102-SV 4/8/02</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
13025	DRO C10-C25	n.a.	0.38	0.050	0.25	1

### Sample Comments

State of Alaska Lab Certification No. UST-061

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	11/01/2018 02:32	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	11/01/2018 02:32	Don V Viray	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18296C20A	10/24/2018 21:07	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	18296C20A	10/24/2018 21:07	Linda C Pape	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182970039A	10/26/2018 20:02	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182970039A	10/25/2018 07:00	Logan M Brosemer	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** DUP-1-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862515  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>		<b>SW-846 8260B</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	0.003 J	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	N.D.	0.0005	0.002	1
10335	o-Xylene	95-47-6	N.D.	0.0003	0.001	1
<b>GC Volatiles</b>		<b>AK 101</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** DUP-1-W-181018 Grab Groundwater  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862515  
ELLE Group #: 2000886  
Matrix: Groundwater

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	<b>GC Petroleum Hydrocarbons</b>	<b>AK 102-SV 4/8/02</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
13025	DRO C10-C25	n.a.	0.35	0.055	0.27	1

### Sample Comments

State of Alaska Lab Certification No. UST-061

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	11/01/2018 02:52	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	11/01/2018 02:52	Don V Viray	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18296C20A	10/24/2018 22:02	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	18296C20A	10/24/2018 22:02	Linda C Pape	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182970039A	10/26/2018 20:30	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182970039A	10/25/2018 07:00	Logan M Brosemer	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** QA-1-W-181018 Water  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
**ELLE Sample #:** WW 9862516  
**ELLE Group #:** 2000886  
**Matrix:** Water

**Project Name:** 97324

**Submittal Date/Time:** 10/22/2018 09:00  
**Collection Date/Time:** 10/18/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
<b>GC/MS Volatiles</b>			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.	0.0002	0.005	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	m+p-Xylene	179601-23-1	N.D.	0.0005	0.002	1
10335	o-Xylene	95-47-6	N.D.	0.0003	0.001	1
<b>GC Volatiles</b>			<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

\*=This limit was used in the evaluation of the final result

**Sample Description:** QA-1-W-181018 Water  
Facility# 97324  
4417 Lake Otis Pkwy - Anchorage, AK

**ChevronTexaco**  
ELLE Sample #: WW 9862516  
ELLE Group #: 2000886  
Matrix: Water

**Project Name:** 97324

Submittal Date/Time: 10/22/2018 09:00  
Collection Date/Time: 10/18/2018

### Sample Comments

State of Alaska Lab Certification No. UST-061

### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 AK HVOCs + BTEX	SW-846 8260B	1	E183042AA	10/31/2018 22:29	Don V Viray	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	E183042AA	10/31/2018 22:29	Don V Viray	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18296C20A	10/24/2018 17:27	Linda C Pape	1
01146	GC VOA Water Prep	SW-846 5030B	1	18296C20A	10/24/2018 17:27	Linda C Pape	1

\*=This limit was used in the evaluation of the final result



## Quality Control Summary

Client Name: ChevronTexaco  
Reported: 11/08/2018 12:50

Group Number: 2000886

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: E183042AA	Sample number(s): 9862511-9862516		
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.002	0.005
Bromomethane	N.D.	0.0005	0.001
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0003	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0003	0.001
Dibromochloromethane	N.D.	0.0004	0.001
1,2-Dibromoethane	N.D.	0.0003	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0003	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.002	0.005
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Freon 113	N.D.	0.002	0.010
Methylene Chloride	N.D.	0.0002	0.001
1,1,1,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,2,4-Trichlorobenzene	N.D.	0.0004	0.005
1,1,1-Trichloroethane	N.D.	0.0002	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0004	0.001
1,2,3-Trichloropropane	N.D.	0.0002	0.005
Vinyl Chloride	N.D.	0.0004	0.001
m+p-Xylene	N.D.	0.0005	0.002
o-Xylene	N.D.	0.0003	0.001

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: ChevronTexaco  
Reported: 11/08/2018 12:50

Group Number: 2000886

### Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Batch number: 18296C20A TPH-GRO AK water C6-C10	Sample number(s): 9862512-9862516 N.D.	0.014	0.10
Batch number: 182970039A DRO C10-C25	Sample number(s): 9862512-9862515 N.D.	0.050	0.25

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: E183042AA	Sample number(s): 9862511-9862516								
Benzene	0.0200	0.0207			104		80-120		
Bromodichloromethane	0.0200	0.0211			105		71-120		
Bromoform	0.0200	0.0207			103		51-120		
Bromomethane	0.0200	0.0163			82		53-128		
Carbon Tetrachloride	0.0200	0.0213			106		64-134		
Chlorobenzene	0.0200	0.0210			105		80-120		
Chloroethane	0.0200	0.0177			88		55-123		
Chloroform	0.0200	0.0215			107		80-120		
Chloromethane	0.0200	0.0195			97		56-121		
Dibromochloromethane	0.0200	0.0208			104		71-120		
1,2-Dibromoethane	0.0200	0.0209			104		77-120		
1,2-Dichlorobenzene	0.0200	0.0214			107		80-120		
1,3-Dichlorobenzene	0.0200	0.0211			106		80-120		
1,4-Dichlorobenzene	0.0200	0.0214			107		80-120		
Dichlorodifluoromethane	0.0200	0.0144			72		41-127		
1,1-Dichloroethane	0.0200	0.0210			105		80-120		
1,2-Dichloroethane	0.0200	0.0214			107		73-124		
1,1-Dichloroethene	0.0200	0.0212			106		80-131		
cis-1,2-Dichloroethene	0.0200	0.0215			107		80-120		
trans-1,2-Dichloroethene	0.0200	0.0213			107		80-120		
1,2-Dichloropropane	0.0200	0.0211			106		80-120		
cis-1,3-Dichloropropene	0.0200	0.0208			104		75-120		
trans-1,3-Dichloropropene	0.0200	0.0203			102		67-120		
Ethylbenzene	0.0200	0.0211			105		80-120		
Freon 113	0.0200	0.0195			97		73-139		
Methylene Chloride	0.0200	0.0208			104		80-120		
1,1,2,2-Tetrachloroethane	0.0200	0.0206			103		72-120		
Tetrachloroethene	0.0200	0.0215			107		80-120		
Toluene	0.0200	0.0209			104		80-120		
1,2,4-Trichlorobenzene	0.0200	0.0216			108		63-120		

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: ChevronTexaco  
Reported: 11/08/2018 12:50

Group Number: 2000886

### LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,1-Trichloroethane	0.0200	0.0209			105		67-126		
1,1,2-Trichloroethane	0.0200	0.0215			108		80-120		
Trichloroethene	0.0200	0.0210			105		80-120		
Trichlorofluoromethane	0.0200	0.0170			85		55-135		
1,2,3-Trichloropropane	0.0200	0.0212			106		75-124		
Vinyl Chloride	0.0200	0.0187			94		56-120		
m+p-Xylene	0.0400	0.0431			108		80-120		
o-Xylene	0.0200	0.0212			106		80-120		
	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>					
Batch number: 18296C20A TPH-GRO AK water C6-C10	Sample number(s): 9862512-9862516								
	1.10	1.14			104		60-120		
	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>	<b>mg/l</b>					
Batch number: 182970039A DRO C10-C25	Sample number(s): 9862512-9862515								
	4.01	4.14	4.01	3.96	103	99	75-125	5	20

### MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18296C20A TPH-GRO AK water C6-C10	Sample number(s): 9862512-9862516 UNSPK: 9862513									
	N.D.	1.10	1.27	1.10	1.27	115	115	60-120	0	20

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 AK HVOCs + BTEX  
Batch number: E183042AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9862511	100	100	100	100
9862512	101	98	101	101
9862513	101	99	101	100
9862514	99	98	101	102

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

## Quality Control Summary

Client Name: ChevronTexaco  
Reported: 11/08/2018 12:50

Group Number: 2000886

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 AK HVOCs + BTEX  
Batch number: E183042AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9862515	99	101	101	102
9862516	99	99	100	101
Blank	101	100	99	101
LCS	100	100	100	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TPH-GRO AK water C6-C10  
Batch number: 18296C20A

	Trifluorotoluene-F
9862512	87
9862513	88
9862514	88
9862515	87
9862516	88
Blank	88
LCS	100
MS	95
MSD	96
Limits:	60-120

Analysis Name: AK 102-SV DRO  
Batch number: 182970039A

	Orthoterphenyl
9862512	108
9862513	103
9862514	109
9862515	105
Limits:	50-150

	Orthoterphenyl
Blank	98
LCS	102
LCSD	101
Limits:	60-120

\*- Outside of specification

\*\* - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

# Chevron Generic Analysis Request/Chain of Custody



**Lancaster Laboratories**

Acct. # 10880 For Eurofins Lancaster Laboratories use only  
 Group # 2000886 Sample # 9862511-16  
Instructions on reverse side correspond with circled numbers.

1 Client Information				4 Matrix				5 Analyses Requested										6 Remarks							
Facility # <u>CEML 97324</u>		WBS <u>08.02</u>		Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Total Number of Containers	Ground <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Air <input type="checkbox"/>	BTEX + MTBE - 8021 <input type="checkbox"/> 8260 full scan	Naphth <input type="checkbox"/> 8260 <input type="checkbox"/>	Oxygenates TPH-GRO <input type="checkbox"/> TPH-DRO <input type="checkbox"/>	8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>	8260 <input type="checkbox"/>	Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input type="checkbox"/>	Method <input type="checkbox"/> EPH <input type="checkbox"/>	Method <input type="checkbox"/> HVOX <u>8260</u>	SCR #: _____											
Site Address <u>4417 LAKE OTES PARKWAY ANCHORAGE, AK</u>		Lead Consultant <u>ERIC HETRECK GHD</u>												<input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits											
Chevron PM <u>ERIC HETRECK</u>		Consultant/Office <u>5610 SILVERADO WAY, STE 12, ANCHORAGE, AK</u>												<input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil		8021 <input type="checkbox"/> 8260 <input type="checkbox"/>		8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>		Diss. <input type="checkbox"/> EPH <input type="checkbox"/>		Method <input type="checkbox"/> HVOX <u>8260</u>		6 EMAIL RESULTS TO: SIOBHAN.PATRICHARD@GHD.COM	
Consultant Project Mgr. <u>SIOBHAN PATRICHARD</u>		Consultant Phone # <u>970-222-8220</u>												Grab <input type="checkbox"/> Composite <input type="checkbox"/>		8260 <input type="checkbox"/>		8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>		Diss. <input type="checkbox"/> EPH <input type="checkbox"/>		Method <input type="checkbox"/> HVOX <u>8260</u>			
Sampler <u>O. HAN &amp; T. WEAVER</u>		Sample Identification												Date Time		TPH-GRO <input type="checkbox"/> TPH-DRO <input type="checkbox"/>		8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>		Diss. <input type="checkbox"/> EPH <input type="checkbox"/>		Method <input type="checkbox"/> HVOX <u>8260</u>			
Sample ID		Date												Time		TPH-GRO <input type="checkbox"/> TPH-DRO <input type="checkbox"/>		8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>		Diss. <input type="checkbox"/> EPH <input type="checkbox"/>		Method <input type="checkbox"/> HVOX <u>8260</u>			
Date		Time		Grab		TPH-GRO <input type="checkbox"/> TPH-DRO <input type="checkbox"/>		8015 <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/>		Diss. <input type="checkbox"/> EPH <input type="checkbox"/>		Method <input type="checkbox"/> HVOX <u>8260</u>													
MW-9-W-181018		10/18/18		0548		X		X		X		X													
MW-8-RR-W-181018		10/18/18		1038		X		X		X		X													
MW-1R-W-181018		10/18/18		1121		X		X		X		X													
MW-2-R-W-181018		10/18/18		1247		X		X		X		X													
DUP-1-W-181018		10/18/18		/		X		X		X		X													
RA-1-W-181018		/		/		/		/		/		/													
7 Turnaround Time Requested (TAT) (please circle)				Relinquished by		Date		Time		Received by		Date		Time											
Standard <input checked="" type="radio"/> 5 day 72 hour 48 hour 24 hour				<u>[Signature]</u>		10/18/18		1300																	
8 Data Package (circle if required)				Relinquished by Commerical Carrier:		Date		Time		Received by		Date		Time											
Type I - Full <input type="radio"/> Type VI (Raw Data) <input type="radio"/>				UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other <input type="checkbox"/>		10/22/18		0900		<u>[Signature]</u>		10/22/18		0900											
Alaska/Type III <input checked="" type="radio"/>				CVX-RTBU-FI_05 (default)		Temperature Upon Receipt <u>1.1</u> °C		Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No																	



Client: CEMC

**97324**

**Delivery and Receipt Information**

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>10/22/2018 9:00</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>AK</u>		

**Arrival Condition Summary**

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace $\geq$ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCI
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Deborah Neslund (208) at 10:27 on 10/22/2018*

**Samples Chilled Details: 97324**

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT131	1.1	DT	Wet	Y	Bagged	N

# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>BMQL</b>	Below Minimum Quantitation Level	<b>mL</b>	milliliter(s)
<b>C</b>	degrees Celsius	<b>MPN</b>	Most Probable Number
<b>cfu</b>	colony forming units	<b>N.D.</b>	non-detect
<b>CP Units</b>	cobalt-chloroplatinate units	<b>ng</b>	nanogram(s)
<b>F</b>	degrees Fahrenheit	<b>NTU</b>	nephelometric turbidity units
<b>g</b>	gram(s)	<b>pg/L</b>	picogram/liter
<b>IU</b>	International Units	<b>RL</b>	Reporting Limit
<b>kg</b>	kilogram(s)	<b>TNTC</b>	Too Numerous To Count
<b>L</b>	liter(s)	<b>µg</b>	microgram(s)
<b>lb.</b>	pound(s)	<b>µL</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>umhos/cm</b>	micromhos/cm
<b>meq</b>	milliequivalents	<b>MCL</b>	Maximum Contamination Limit
<b>mg</b>	milligram(s)		
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

# Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$ . The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$ . The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$ . The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

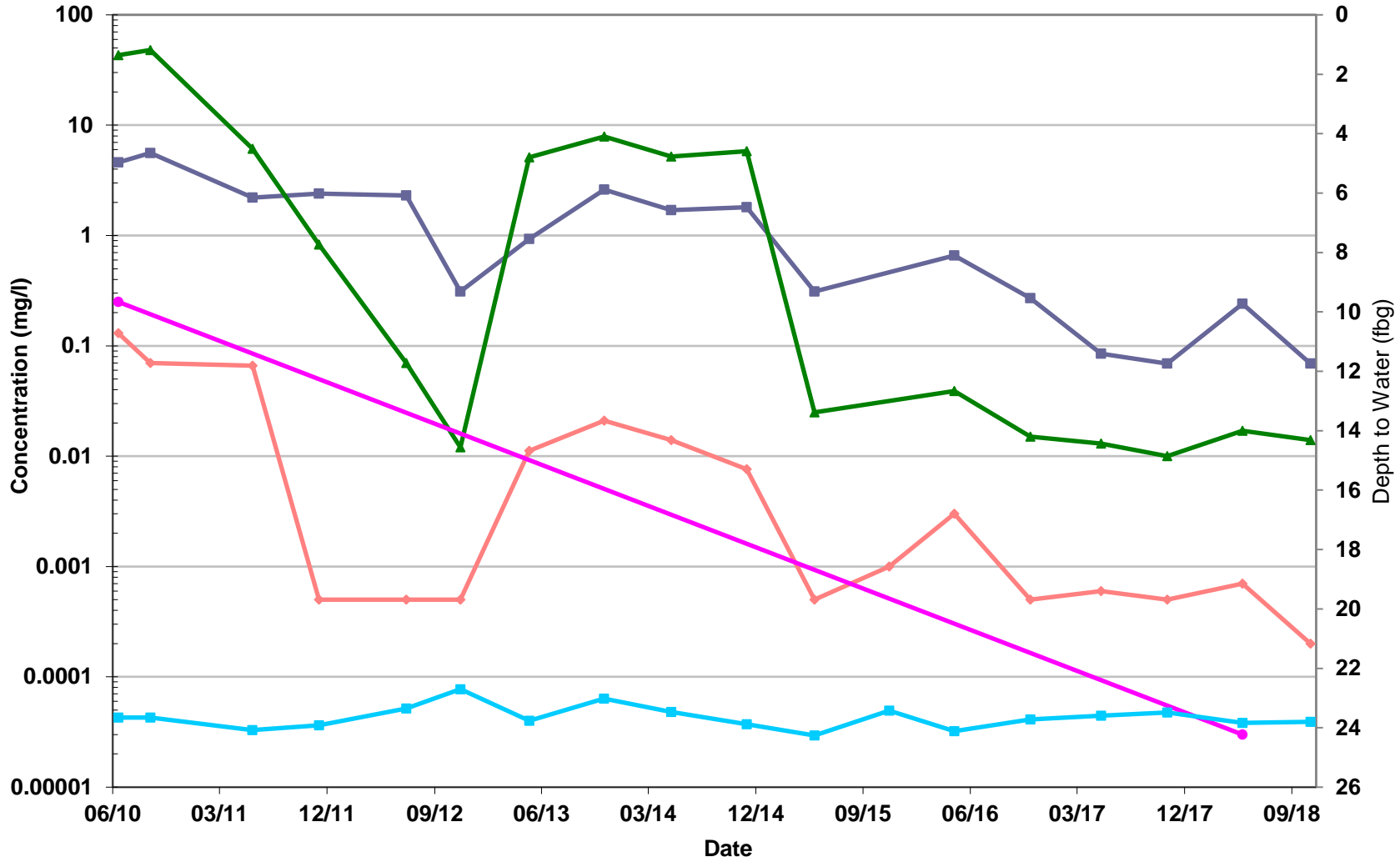
Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



# Appendix E

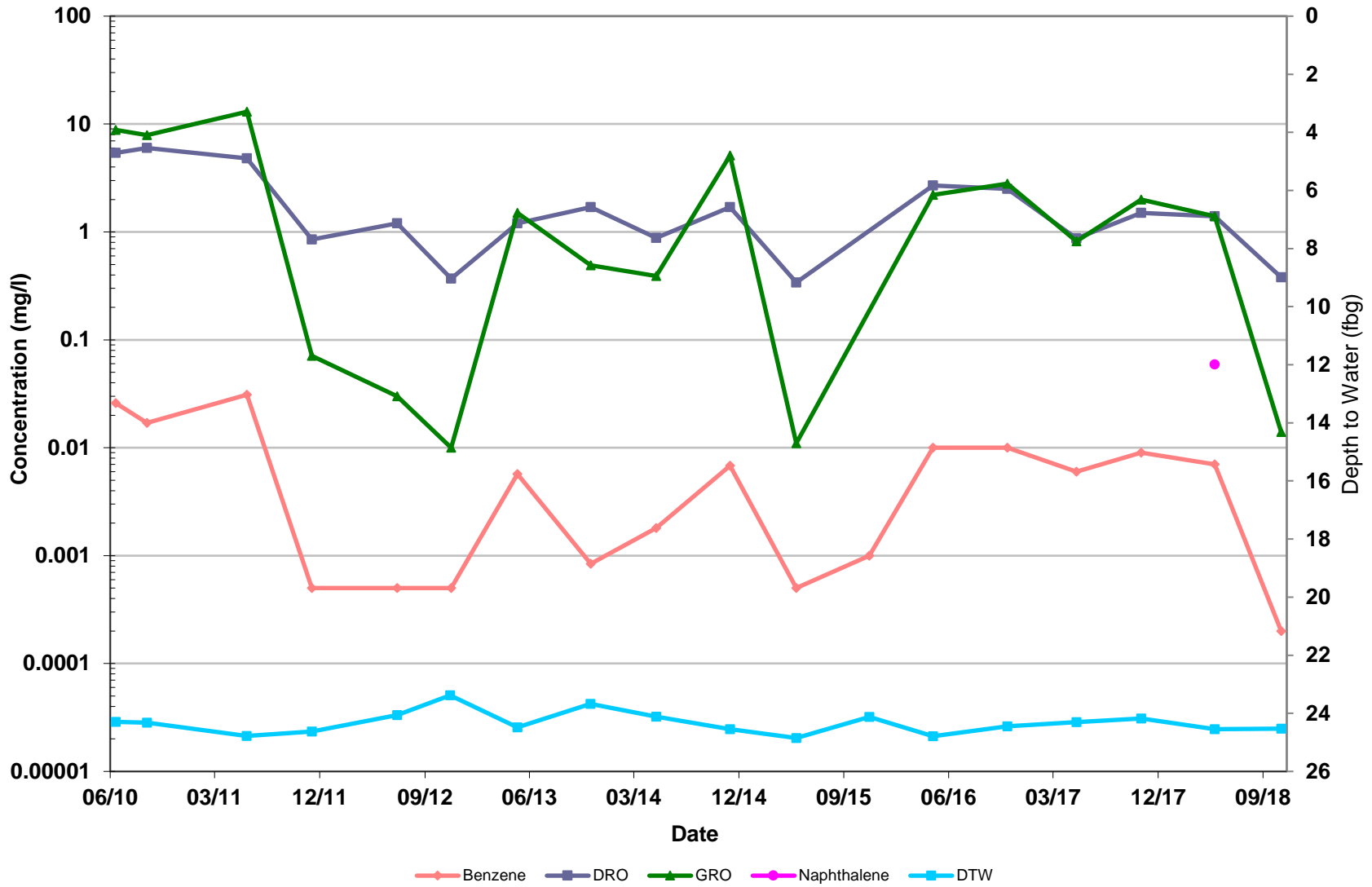
## Petroleum Hydrocarbon Concentration Graphs

# MW-1R



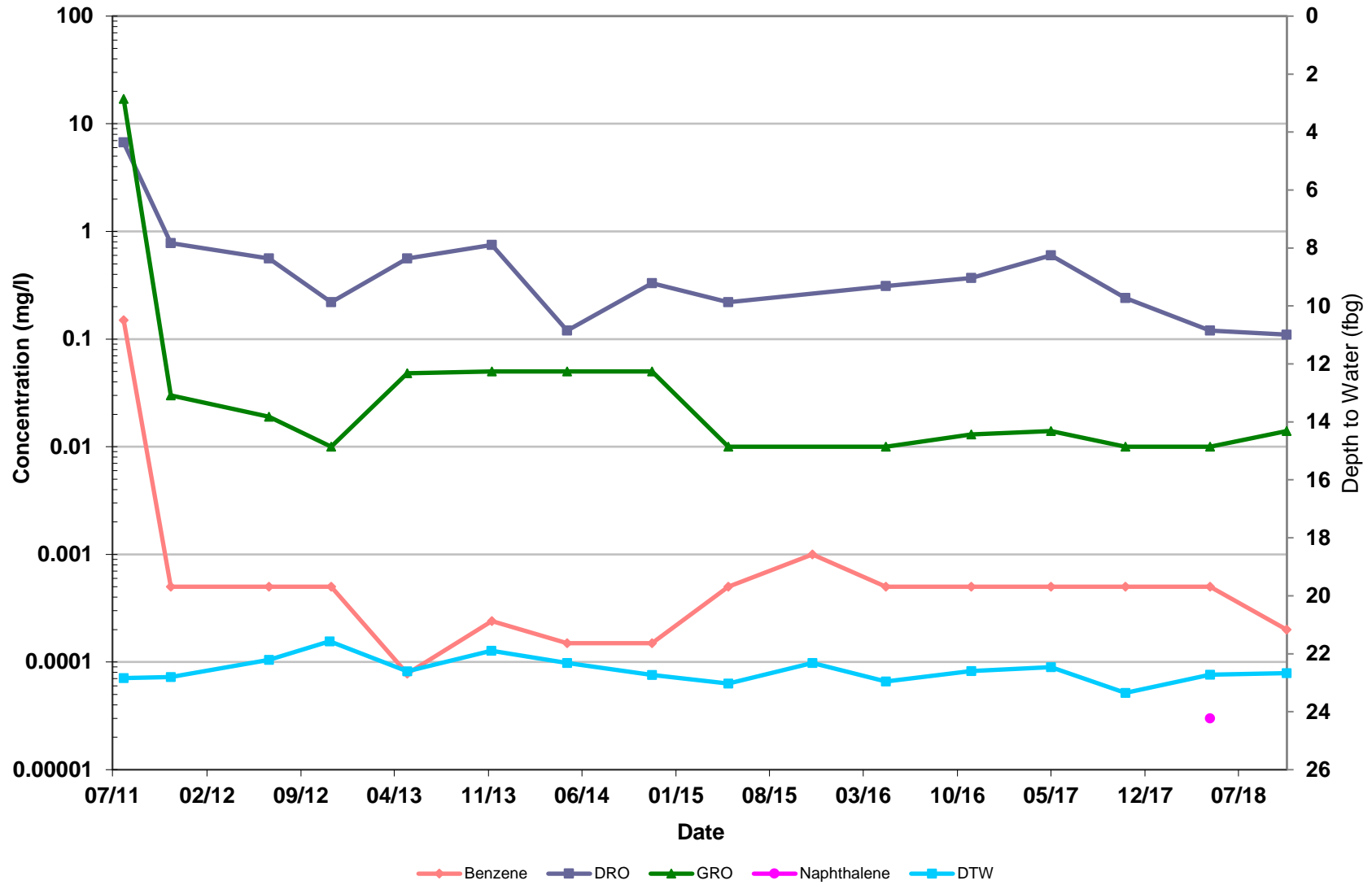
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska

# MW-2R



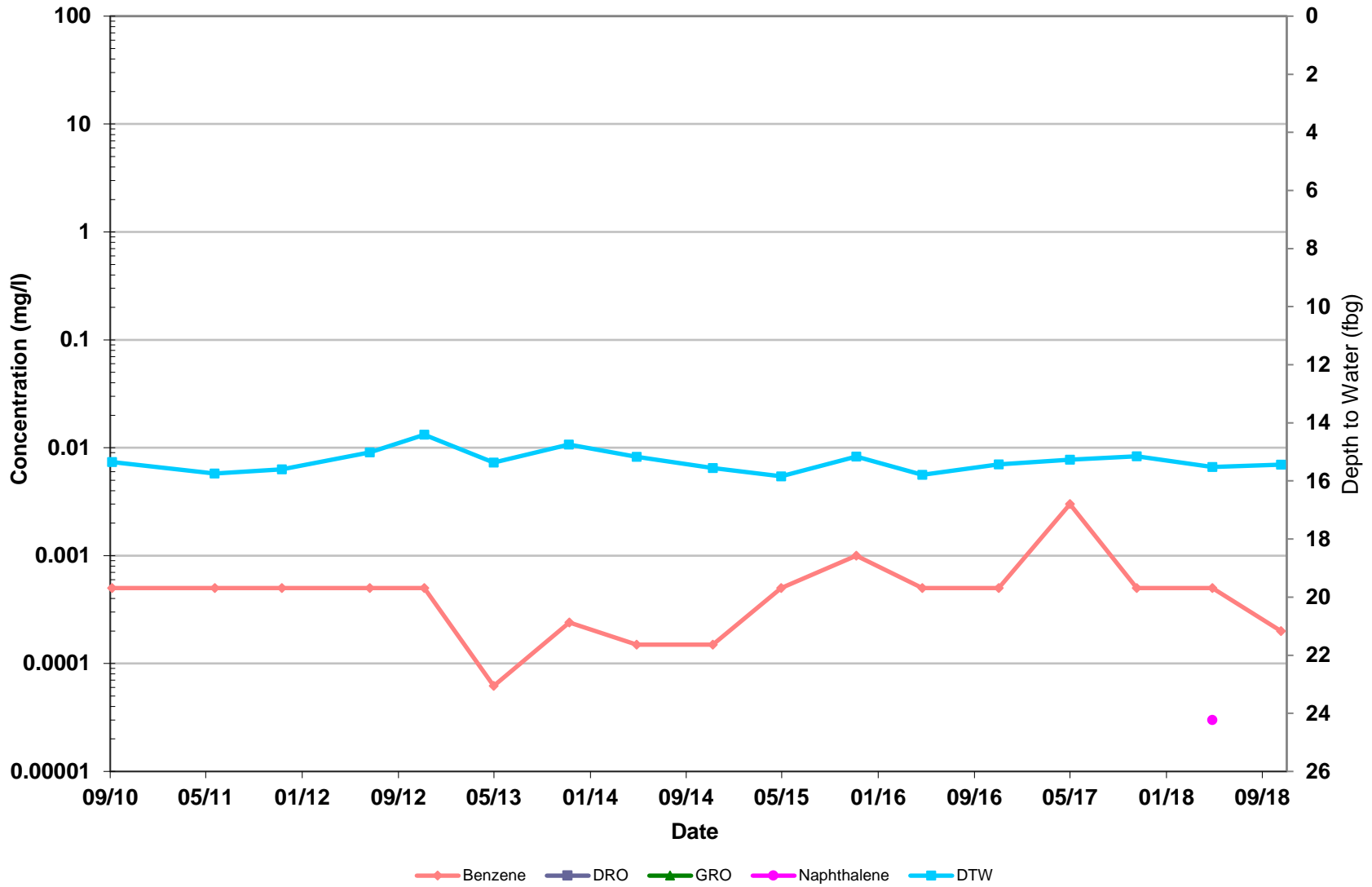
Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska

# MW-8RR



Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska

# MW-9



Former Chevron-Branded Service Station 97324  
4417 Lake Otis Parkway  
Anchorage, Alaska

# Appendix F

## ADEC Laboratory Data Review Checklist and Memorandum

## Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

November 25, 2018

CS Report Name:

Second Semiannual 2018  
Groundwater Monitoring  
Report

Report Date:

November 08, 2018

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

2000886

ADEC File Number:

2100.26.008

Hazard Identification Number:

23885

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes    No                      Comments:

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:

Samples not transferred

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes    No                      Comments:

b. Correct analyses requested?

Yes    No                      Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes    No                      Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes    No                      Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes    No                      Comments:

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 discrepancies



e. Data quality or usability affected?

Comments:

None

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes  No

Comments:

No discrepancies

c. Were all corrective actions documented?

Yes  No

Comments:

No corrective actions

d. What is the effect on data quality/usability according to the case narrative?

Comments:

None

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No

Comments:

b. All applicable holding times met?

Yes  No

Comments:

c. All soils reported on a dry weight basis?

Yes  No

Comments:

No soils

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

e. Data quality or usability affected?

Comments:

None

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

Yes  No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

No affected samples

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

None

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:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No

Comments:

No metals/inorganics

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:

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:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

No affected samples

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No Comments:

No affected samples

vii. Data quality or usability affected?

Comments:

None

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No Comments:

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:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes  No Comments:

No failed surrogates

iv. Data quality or usability affected?

Comments:

None

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes  No

Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?  
(If not, a comment explaining why must be entered below)

Yes  No

Comments:

iii. All results less than LOQ?

Yes  No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

None

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No

Comments:

ii. Submitted blind to lab?

Yes  No

Comments:

- 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:

- iv. Data quality or usability affected?

Comments:

- f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

Yes    No    Not Applicable

- i. All results less than LOQ?

Yes    No   Comments:

- ii. If above LOQ, what samples are affected?

Comments:

- iii. Data quality or usability affected?

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

- a. Defined and appropriate?

Yes    No   Comments:



# Memorandum

November 29, 2018

To: ADEC Ref. No.: 612061

---

From: Jeffrey Cloud  Tel: 206-914-3141

---

CC: Siobhan Pritchard

---

**Subject: QA/QC Review  
ChevronTexaco Site 97324  
Job # 2000886  
October 2018**

---

## 1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in Anchorage, Alaska during October 2018. Samples were submitted to Eurofins Lancaster Laboratories Environmental (ELLE), located in Lancaster, Pennsylvania.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples, matrix spikes and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods and applicable guidance from the document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008 subsequently referred to as the "Guidelines" in this Memorandum.

## 2. Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice and stored by the laboratory at the required temperature (0-6°C).



### 3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

### 4. Surrogate Spike Recoveries

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC), gasoline range organics (GRO) and diesel range organics (DRO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Surrogate recoveries were assessed against the control limits. All surrogate recoveries met the associated criteria.

### 5. Laboratory Control Sample Analyses

Laboratory control samples (LCS)/laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS or LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable).

### 6. Matrix Spike/Matrix Spike Duplicate Analyses

To evaluate the effects of sample matrices on the extraction process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as matrix spike/matrix spike duplicate (MS/MSD) samples. The RPD between the MS and MSD is used to assess analytical precision.



The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

## 7. Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

### *Trip Blank Sample Analysis*

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for analysis. All results were non-detect for the analytes of interest.

### *Field Duplicate Sample Analysis*

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory. The RPDs associated with the duplicate sample must be less than 50 percent. If the reported concentration in both the investigative sample and its duplicate is less than five times the reporting limit (RL), the evaluation criterion is one times the RL value.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

## 8. Analyte Reporting

Non-detect data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were reported as estimated (J).

## 9. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.