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1	First Semiannual 2018 Groundwater Monitoring Report	Report 33	

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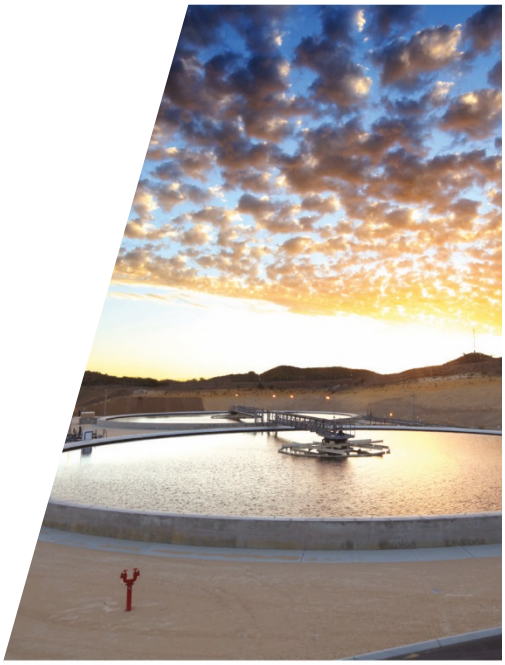
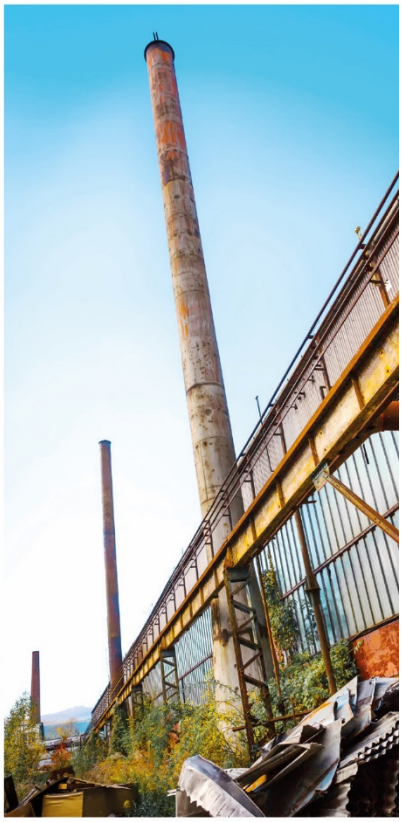


First Semiannual 2018 Groundwater Monitoring Report

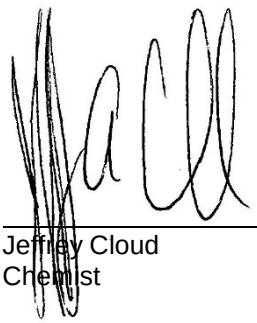
Former Chevron-Branded
Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska
ADEC File ID: 2110.38.007
Hazard ID: 2007



Chevron Environmental Management Company

First Semiannual 2018 Groundwater Monitoring Report

Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska
ADEC File ID: 2110.38.007
Hazard ID: 2007



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Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
COPCs	constituents of potential concern
CSM	conceptual site model
DRO	diesel range organics
ft btoc	feet below top of casing
ft	feet
GRO	gasoline range organics
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
No	number
P.G.	Professional Geologist
UST	underground storage tank
VOC	volatile organic compounds

1. Introduction

GHD is submitting this *First 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 92609. Groundwater monitoring and sampling was performed by GHD in accordance with the 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*.

Project objectives are to monitor current groundwater conditions to evaluate petroleum hydrocarbon attenuation.

1.1 Site Description and Background

The site is located at Mile 79 Seward Highway in Girdwood, Alaska (Figure 1). The property's legal description is US Survey 3188 Lot 2, T8N, R3E, Section 5. The latitude and longitude are 60.490498º north and 148.584071º west. The site is a former Chevron-branded service station that is currently vacant with the exception of an abandoned kiosk. Former site facilities consisted of two 10,000-gallon underground storage tanks (USTs) and one 3,000-gallon UST. The USTs and underground piping were removed in 1980.

Land use surrounding the site is primarily undeveloped. A business is located southeast of the site across Seward Highway. Residences border the site on the north and east.

Ten monitoring wells and one drinking water well are monitored and sampled semiannually; three additional monitoring wells are monitored during these events. Site photographs are presented in Appendix A.

1.2 Hydrogeology

The site is located in south central Alaska, at the eastern most extent of the Turnagain Arm between Twenty Mile River and Portage Creek. Historical static groundwater depths have ranged between 0.68 and 11.90 feet below top of casing (ft btoc). Local tidal influence can be as great as 37 feet (ft) which may produce groundwater fluctuations in site monitoring wells. Static groundwater depths ranged from 4.36 (MW-9) to 10.43 ft btoc (MW-1) on June 11, 2018. Groundwater flow was to the north with a gradient of 0.03, which is consistent with historical data (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 as 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 - gas 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

On June 11, 2018, GHD gauged groundwater monitoring wells MW-1, MW-3 and MW-6 through MW-16. Between June 11 and 12, 2018 GHD sampled groundwater monitoring wells MW-3, MW-6, MW-7, MW-9, MW-11 through MW-16, and drinking water well DWW-1. Monitoring wells MW-3, MW-6, MW-7, MW-9, MW-11 through MW-16 were sampled using a low flow purge and sampling method. Only well DWW-1 was sampled by no purge sampling method.

2.1 Low Flow Purging and Sampling

Prior to monitoring, each monitoring well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate. Depth to groundwater and total well depth were measured using an electronic water level meter capable of 0.01 ft 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 were 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 three to five 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:

- ± 3 percent for temperature (minimum of ± 0.2ºC),
- ± 0.1 for pH,
- ± 3 percent for conductivity,
- ± 10 mv for redox potential,
- ± 10 percent for dissolved oxygen, and
- ± 10 percent of turbidity.

2.2 No Purge Sampling

Prior to monitoring, each well was opened and the cap removed to allow groundwater levels to stabilize and equilibrate. Depth to groundwater and total depth was measured and recorded with an electronic water level meter capable of 0.01 foot accuracy. A new, unused HydraSleeve™ sampler was deployed based on sampler length and water column height to collect volatile organic compound (VOC) samples. Samplers were deployed such that the top was suspended one sampler length below the soil/groundwater interface. The sampler was bottom set in wells with insufficient water column for standard deployment. Samplers were deployed a minimum of two hours before sample collection to allow for sufficient equilibration time. HydraSleeves™ were pulled upward through the water column at an approximate rate of 1 foot per second to collect samples.

Groundwater samples, including duplicate samples, were decanted into clean containers supplied by the analytical laboratory. Groundwater samples were submitted under chain of custody to Eurofins Lancaster Laboratories of Pennsylvania. GHD monitoring data package is presented in Appendix C.

2.3 Data Quality

All field instruments were calibrated prior to mobilization according to the manufacturer's specifications and calibration was verified and documented onsite on a daily basis. Calibration forms are included in Appendix C. All field staff is trained in routine maintenance and operation of instrumentation. All reusable sampling equipment was decontaminated between sample points 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 volatile organic compounds (VOCs) were collected before samples for non volatile compounds. Groundwater samples, including one duplicate per ten samples collected per day of sampling 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°C (+/- 2ºC). 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.

2.4 Purged Groundwater Disposal

Approximately 10.7 gallons of groundwater not used for sampling was filtered through granular activated carbon and purged to the ground near the center of the site 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 AK 102
- GRO by Alaska Series Method AK 101
- VOCs by SW-846 Method 8260
- Volatiles by Environmental Protection Agency (EPA) Method 524.2

3.2 Groundwater Sampling Results

DRO was detected above cleanup levels in MW-11 at 6.8 J mg/L and MW-14 at 2.5 J mg/L. GRO, ethylbenzene, and xylenes was detected above cleanup levels in MW-11 at 20 mg/L, 1.0 mg/L, and 4.3 mg/L, respectively. Monitoring well MW-13 had an ethylbenzene concentration above cleanup levels at 0.026 mg/L and 0.028 mg/L in a duplicate sample. Hydrocarbon concentrations in groundwater are shown on Figure 2. Current groundwater analytical data is presented in Table 1. Historical groundwater analytical data is presented in Table 2. The laboratory analytical report is presented in Appendix D. Petroleum hydrocarbon concentration graphs are presented in Appendix E.

Based on the quality assurance/quality control review, the data submitted were judged to be acceptable for use with the qualifications noted. The ADEC Laboratory Data Review Checklist and memorandum are presented in Appendix F.

4. Conclusions and Recommendations

DRO was detected above cleanup levels in MW-11 and MW-14. GRO concentrations was detected above cleanup levels in MW-11. Benzene was detected above cleanup levels in MW-11 and MW-13. GHD will continue semiannual groundwater sampling using low flow purge sampling.

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.

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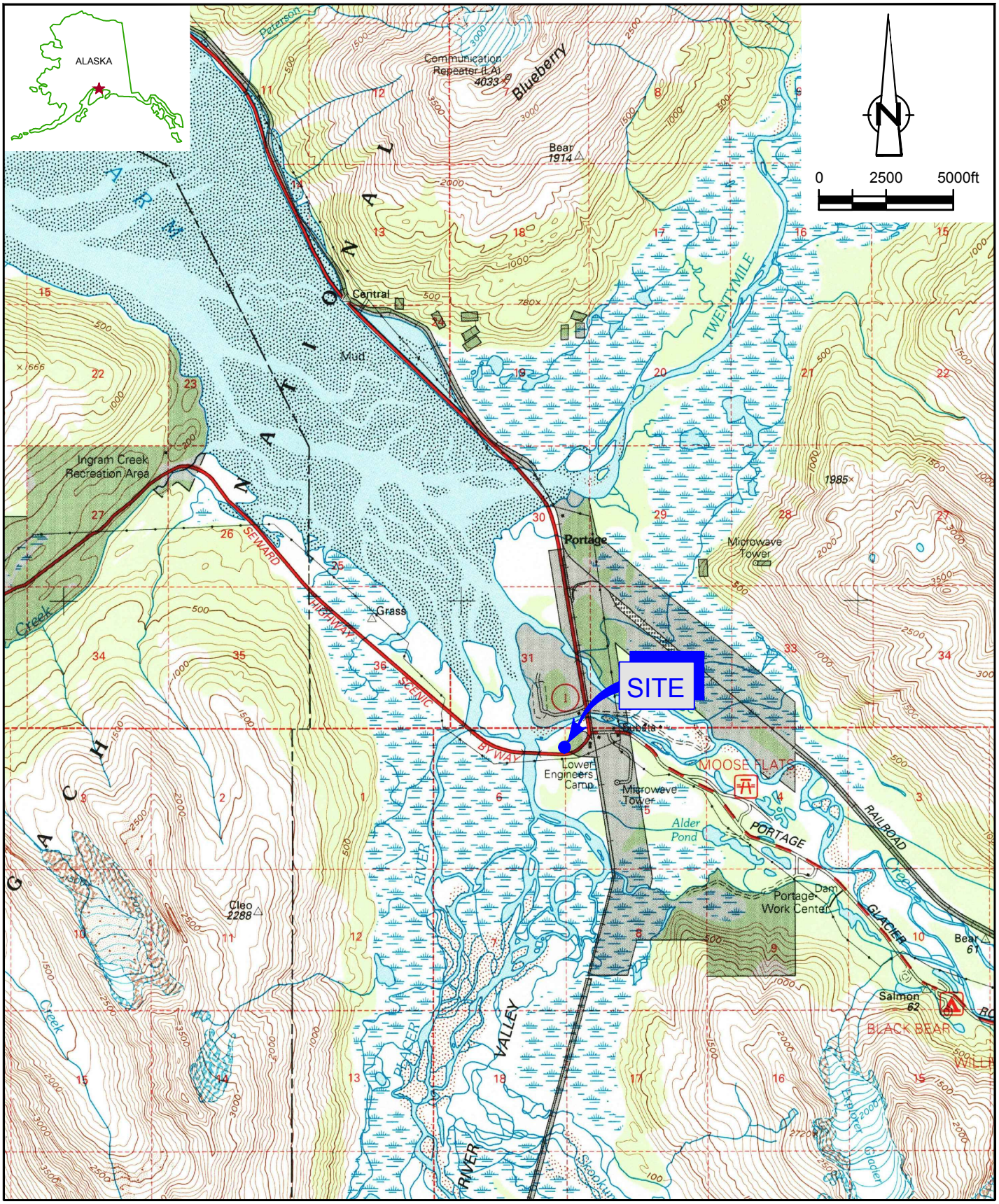
Figures



Source: USGS QUAD MAP; SEWARD D-6, AK, 1994.

FORMER CHEVRON-BRANDED SERVICE STATION 92609
MILE 79 SEWARD HIGHWAY
GIRDWOOD, ALASKA

620911-95

Jul 12, 2018

VICINITY MAP

FIGURE 1

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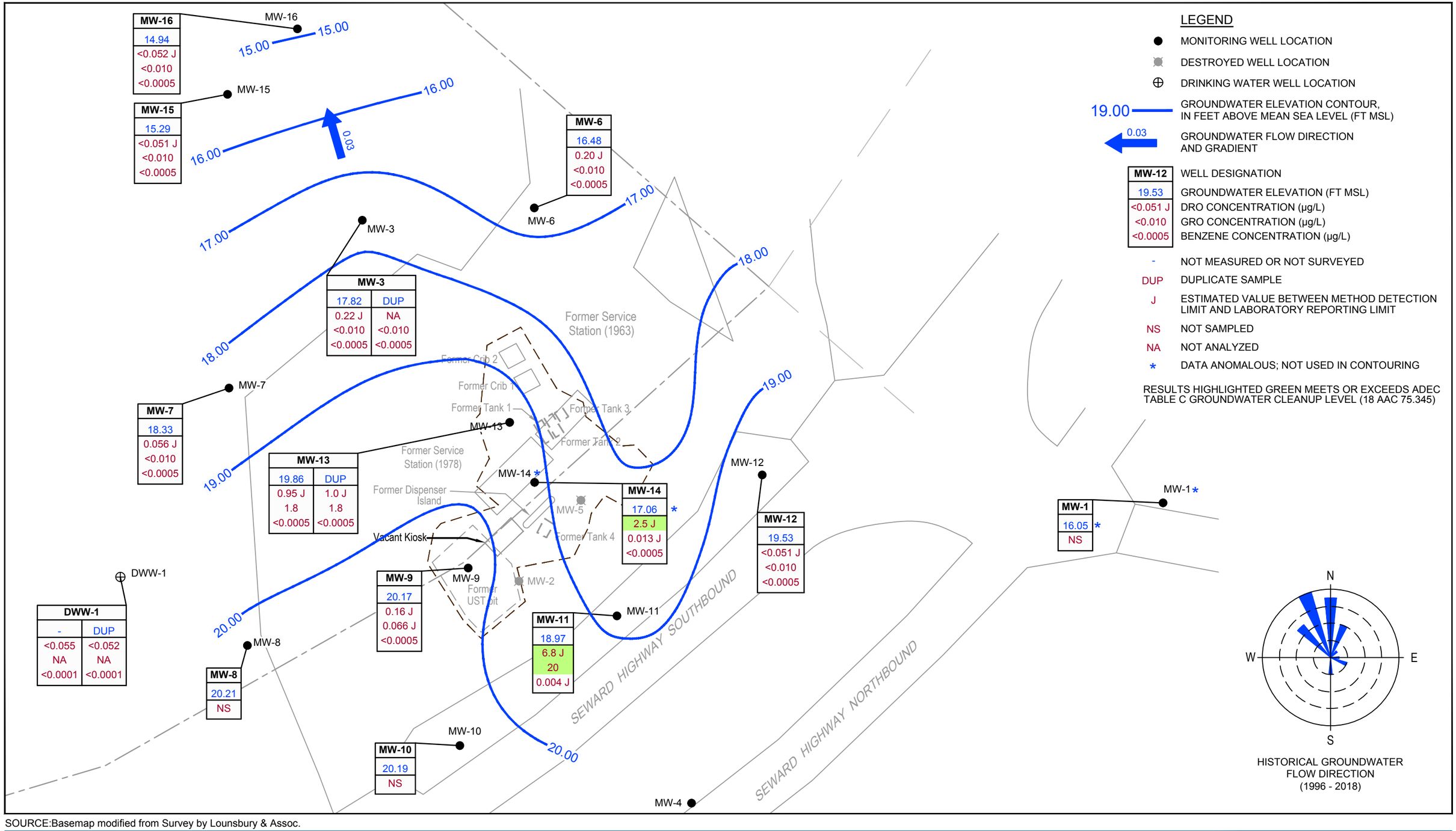

SOURCE:Basemap modified from Survey by Lounsbury & Assoc.

0 20 40ft

FORMER CHEVRON-BRANDED SERVICE STATION 92609
MILE 79 SEWARD HIGHWAY
GIRDWOOD, ALASKA

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - JUNE 11-12, 2018

620911-95

Jul 23, 2018

FIGURE 2

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Tables

Table 1

Current Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

Location	Date	TOC	DTW	GWE	LT	HYDROCARBONS			PRIMARY VOCS			
						DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**
DWW-1	6/12/2018	--	--	--	--	<0.055 / <0.052	--	<0.083 / <0.077	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-1	6/11/2018[1]	26.48	10.43	16.05	--	--	--	--	--	--	--	--
MW-3	6/12/2018	26.74	8.92	17.82	--	0.22 J	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005
MW-6	6/11/2018*	23.85	7.37	16.48	--	0.20 J	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-7	6/12/2018	27.07	8.74	18.33	--	0.056 J	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	6/11/2018[1]	28.86	8.65	20.21	--	--	--	--	--	--	--	--
MW-9	6/12/2018	24.53	4.36	20.17	--	0.16 J	0.066 J	--	<0.0005	<0.0005	0.002	0.002
MW-10	6/11/2018[1]	25.56	5.37	20.19	--	--	--	--	--	--	--	--
MW-11	6/11/2018	25.52	6.55	18.97	--	**6.8 J**	**20**	--	0.004 J	0.077	**1.0**	**4.3**
MW-12	6/11/2018	24.72	5.19	19.53	--	<0.051 J	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-13	6/11/2018	24.35	4.49	19.86	--	0.95 J / 1.0 J	1.8 / 1.8	--	<0.0005 / <0.0005	0.061 / 0.074	**0.026 / 0.028**	0.12 / 0.13
MW-14	6/12/2018	24.35	7.29	17.06	--	**2.5 J**	0.013 J	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-15	6/11/2018	24.25	8.96	15.29	--	<0.051 J	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005
MW-16	6/11/2018	23.61	8.67	14.94	--	<0.052 J	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005
QA	6/12/2018	--	--	--	--	--	<0.010	--	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005

Table 1

Current Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

Notes and Abbreviations

TOC = top of casing

DTW = depth to water

GWE = groundwater elevation

LT = LNAPL thickness

TPH = total petroleum hydrocarbons

DRO = diesel range organics by Alaska Series Method AK102

GRO = gasoline range organics by Alaska Series Method AK101

RRO = residual range organics by Alaska Series Method AK103

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

[a] = 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

<x = Constituent not detected above x milligrams per liter

x / y = Sample results / blind duplicate results

* TOC adjusted for 1" cut in order for lid to be placed back on.

1 - Monitor only

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-1	09/14/1995	25.60	6.43	19.17	-	**3.8**	ND	-	ND	ND	ND	ND	-	-	-	0.24
MW-1	05/31/1996	25.60	10.51	15.09	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	08/22/1996	25.60	11.09	14.51	-	-	<0.05 / <0.05	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	-	-	-	-
MW-1	10/22/1996	25.60	10.51	15.09	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	04/26/1997	25.60	6.60	19.00	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	09/09/1997	25.60	6.70	18.90	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	04/19/1998	25.60	4.50	21.10	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	09/21/1998	25.60	4.96	20.64	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-1	04/29/1999	95.43	4.90	90.53	-	0.1	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	-	-	-
MW-1	10/14/1999	95.43	6.12	89.31	-	<0.1	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.05	-	-	-
MW-1	05/20/2000	95.43	8.65	86.78	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-1	09/24/2000	95.43	11.14	84.29	-	0.168	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-1	05/02/2001	200.08	6.78	193.30	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-1	09/27/2001	200.08	6.49	193.59	-	-	<0.05 / <0.05	-	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.001	-	-	-
MW-1	10/05/2001	200.08	6.47	193.61	-	<0.112 / <0.1	-	-	-	-	-	-	-	-	-	-
MW-1	05/09/2002	200.08	9.56	190.52	-	<0.1	<0.05 / <0.05	-	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.001	-	-	-
MW-1	09/21/2002	200.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/25/2003	200.08	10.19	189.89	-	0.034	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
MW-1	10/03/2003	32.20	5.65	26.55	-	0.18 / 0.11	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.002 / <0.002	-	-	-
MW-1	04/25/2004	32.20	5.47	26.73	-	0.049 / 0.051	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	-	-	-	-
MW-1	07/01/2004	32.20	10.24	21.96	-	0.082	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-1	10/25/2004	32.20	10.26	21.94	-	0.14	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-1	06/13/2005	32.20	8.93	23.27	-	0.049	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-1	10/11/2005	32.20	5.62	26.58	-	0.086	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-1	05/08/2006	32.20	5.66	26.54	-	0.054	0.011	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-1	09/15/2006	32.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/15/2007	32.20	6.85	25.35	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	08/08/2007	32.20	11.37	20.83	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	06/17/2008	32.20	11.72	20.48	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	08/29/2008	32.20	11.41	20.79	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/13/2009	32.20	8.01	24.19	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	09/09/2009	26.48	10.28	16.20	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	06/02/2010	26.48	8.35	18.13	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	08/03/2010	26.48	10.22	16.26	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/17/2011	26.48	9.30	17.18	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	09/14/2011	26.48	5.00	21.48	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/31/2012	26.48	6.06	20.42	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	08/02/2012	26.48	10.03	16.45	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/18/2013	26.48	6.11	20.37	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	09/15/2013	26.48	6.09	20.39	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/09/2014	26.48	9.56	16.92	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	10/02/2014	26.48	8.68	17.80	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/04/2015	26.48	7.70	18.78	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	10/15/2015	26.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/20/2016[1]	26.48	7.61	18.87	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	09/29/2016[3]	26.48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	05/10/2017[1]	26.48	6.43	20.05	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	10/09/2017[1]	26.48	5.56	20.92	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	06/11/2018[1]	26.48	10.43	16.05	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	09/14/1995	23.13	3.50	19.63	-	**8.40**	**46.0 / 46.0**	-	**0.29**	**8.9**	**0.76**	**4.7**	-	-	-	0.31

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-2	05/31/1996	23.13	4.93	18.20	-	-	**47.4**	-	**0.151**	**6.99**	**0.848**	**4.85**	-	-	-	-
MW-2	08/22/1996	23.13	6.02	17.11	-	-	**35.5**	-	**0.139**	**4.43**	**0.984**	**5.49**	-	-	-	-
MW-2	10/22/1996	23.13	4.46	18.67	-	-	**50.8**	-	**0.199**	**7.5**	**1.08**	**6.19**	-	-	-	-
MW-2	04/26/1997	23.13	4.57	18.56	-	-	**25.8 / 28.1**	-	**0.107 / 0.114**	**2.75 / 3.02**	**0.492 / 0.505**	**2.85 / 2.98**	-	-	-	-
MW-2	09/09/1997	23.13	4.58	18.55	-	-	**39.0 / 39.8**	-	**0.117 / 0.118**	**7.07 / 6.95**	**1.4 / 1.41**	**6.9 / 6.93**	-	-	-	-
MW-2	04/19/1998	23.13	2.00	21.13	-	-	**40.3**	-	<0.1	**6.8**	**1.38**	**7.58**	-	-	-	-
MW-2	09/21/1998	23.13	2.49	20.64	-	-	**38.5**	-	<0.05	**4.77**	**1.2**	**7.02**	-	-	-	-
MW-2	04/29/1999	92.95	0.75	92.20	-	**4.54**	**40.8**	-	**0.15**	**3.16**	**1.03**	**5.74**	**0.232** / <0.05	-	-	-
MW-2	10/14/1999	92.95	2.46	90.49	-	**13.20**	**34.5 / 35.0**	-	**0.068 / 0.053**	**4.4 / 4.57**	**1.22 / 1.25**	**6.99 / 7.4**	<0.25 / <0.25	-	-	-
MW-2	05/20/2000	92.95	4.14	88.81	-	**3.53**	**37.5**	-	**0.0646**	0.678	**0.187**	**6.29**	0.0546	-	-	-
MW-2	09/24/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/14/1995	25.78	6.86	18.92	-	**3.0**	ND	-	ND	0.00063	ND	ND	-	-	-	-
MW-3	05/31/1996	25.78	10.83	14.95	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-3	08/22/1996	25.78	10.90	14.88	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-3	10/22/1996	25.78	9.92	15.86	-	-	<0.05 / <0.05	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.005 / <0.005	-	-	-
MW-3	04/26/1997	25.78	6.75	19.03	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-3	09/09/1997	25.78	6.51	19.27	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-3	04/19/1998	25.78	5.80	19.98	-	-	<0.05 / <0.05	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.001	-	-	-
MW-3	09/21/1998	25.78	6.35	19.43	-	-	<0.05 / <0.05	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001	-	-	-
MW-3	04/29/1999	92.60	5.01	87.59	-	**2.19**	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	10/14/1999	92.60	6.23	86.37	-	0.73	<0.05	-	<0.0005	0.00567	<0.0005	0.0032	<0.001	-	-	-
MW-3	05/20/2000	92.60	8.60	84.00	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-3	09/24/2000	92.60	11.12	81.48	-	**17.2 / 15.5**	<0.05 / <0.05	-	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	<0.001 / <0.002	-	-	-
MW-3	05/02/2001	200.27	6.59	193.68	-	-	<0.05	-	0.000247	<0.0005	<0.0005	<0.001	<0.002	-	-	-
MW-3	09/27/2001	200.27	5.66	194.61	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-	-
MW-3	10/05/2001	200.27	5.65	194.62	-	0.463 / 0.378	-	-	-	-	-	-	-	-	-	-
MW-3	05/09/2002	200.27	8.12	192.15	-	0.299	<0.05	-	<0.0002	0.000502	<0.0005	<0.001	-	-	-	-
MW-3	09/21/2002	200.27	7.22	193.05	-	<0.1 / <0.1	<0.05 / <0.05	-	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / 0.00112	-	-	-	-
MW-3	05/25/2003	200.27	9.31	190.96	-	1.4	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	10/03/2003	32.46	6.80	25.66	-	**2.3**	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	04/25/2004	32.46	5.39	27.07	-	0.2	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	07/01/2004	32.46	9.98	22.48	-	0.4	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-3	10/25/2004	32.46	8.71	23.75	-	**1.6**	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	06/13/2005	32.46	8.18	24.28	-	1.5	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	10/11/2005	32.46	5.50	26.96	-	0.61	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	05/08/2006	32.46	5.49	26.97	-	**3.4**	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	09/15/2006	32.46	6.05	26.41	-	0.28 / 0.24	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-	-
MW-3	05/15/2007	32.46	9.08	23.38	-	0.73	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-3	08/08/2007	32.46	11.90	20.56	-	**4.8**	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-3	06/17/2008	32.46	9.70	22.76	-	**29.0**	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-3	08/29/2008	32.46	11.77	20.69	-	**19.0**	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-3	05/13/2009	32.46	7.40	25.06	-	0.34	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	09/09/2009	26.74	9.45	17.29	-	0.42	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	06/02/2010	26.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	05/17/2011	26.74	8.10	18.64	-	**2.2**	0.012 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	09/14/2011	26.74	7.40	19.34	-	0.71	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	05/31/2012	26.74	5.94	20.80	-	**2.2**	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	08/02/2012	26.74	10.08	16.66	-	0.41	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	05/18/2013	26.74	5.71	21.03	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-3[HS]	05/18/2013	26.74	5.71	21.03	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-

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Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.0000750**	**0.0017**	
MW-3	09/15/2013	26.74	6.08	20.66	-	0.40 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-3	05/09/2014	26.74	8.85	17.89	-	0.34 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-3[HS]	05/09/2014	26.74	8.85	17.89	-	0.85	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-3	10/02/2014	26.74	7.92	18.82	-	0.33 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-3	05/04/2015	26.74	7.59	19.15	-	0.47	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-3	10/15/2015[2]	26.74	6.17	20.57	-	0.70	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-3	05/20/2016[2]	26.74	7.57	19.17	-	0.29	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	09/29/2016	26.74	6.24	20.50	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-3	05/10/2017	26.74	5.64	21.10	-	0.13 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-3	10/10/2017	26.74	5.56	21.18	-	0.13 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-3	06/12/2018	26.74	8.92	17.82		0.22 J	<0.010 / <0.010	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	-
MW-4	09/17/1998	96.25	-	-	-	<0.1	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-4	09/27/1998	96.25	6.52	89.73	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	04/29/1999	96.25	4.61	91.64	-	0.22	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	-	-	-
MW-4	10/14/1999	96.25	5.71	90.54	-	0.17	<0.05	-	<0.0005	0.00218	<0.0005	0.00095	<0.005	-	-	-
MW-4	05/20/2000	96.25	7.22	89.03	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-4	09/24/2000	96.25	9.52	86.73	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-4	05/02/2001	200.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/27/2001	200.94	5.39	195.55	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-4	10/05/2001	200.94	5.39	195.55	-	<0.112 / 0.154	-	-	-	-	-	-	-	-	-	-
MW-4	05/09/2002	200.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/21/2002	200.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/25/2003	200.94	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	10/03/2003	33.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	04/25/2004	33.07	5.50	27.57	-	0.079	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-4	07/01/2004	33.07	8.53	24.54	-	<0.24	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-4	10/25/2004	33.07	7.52	25.55	-	0.083	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-4	06/13/2005	33.07	6.65	26.42	-	0.2	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-4	10/11/2005	33.07	4.93	28.14	-	0.074	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-4	05/08/2006	33.07	5.50	27.57	-	0.062	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-4	09/15/2006	33.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/15/2007	33.07	6.43	26.64	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	08/08/2007	33.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	06/17/2008	33.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	08/29/2008	33.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	09/17/1998	92.92	-	-	-	**4.73**	**49.4**	-	<0.1	**5.65**	**2.03**	**10.3**	-	-	-	-
MW-5	09/27/1998	92.92	3.54	89.38	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	04/29/1999	92.92	0.68	92.24	-	**2.8**	**12.0 / 15.3**	-	**0.0384 / 0.0442**	**1.31 / 1.66**	**0.257 / 0.328**	**1.52 / 1.91**	0.0895 / 0.104	-	-	-
MW-5	10/14/1999	92.92	2.58	90.34	-	0.73	**24.8**	-	**0.043**	**1.81**	**0.806**	**4.67**	<0.125	-	-	-
MW-5	05/20/2000	92.92	4.64	88.28	-	**2.25 / 6.55**	**68.4 / 61.4**	-	**0.167 / 0.155**	**11.7 / 11.1**	**1.68 / 0.809**	**8.87 / 8.56**	<0.1 / <0.2 / 0.17	-	-	-
MW-5	09/24/2000	-	-	-	-		-	-	-	-	-	-	-	-	-	-
MW-6	09/17/1998	-	-	-	-	0.445	0.222	-	<0.0005	<0.0005	0.00277	0.00664	-	-	-	-
MW-6	09/27/1998	-	5.64	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	04/29/1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	10/14/1999	-	3.15	-	-	<0.1	<0.05	-	<0.0005	0.00241	<0.0005	0.0028	<0.005	-	-	-
MW-6	05/20/2000	-	5.84	-	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-6	09/24/2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	05/02/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2

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Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
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						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.0000750**	**0.0017**	
MW-6	09/27/2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	05/09/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	09/21/2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	05/25/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	10/03/2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6	04/25/2004	-	2.38	26.67	-	<0.24	0.16	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-6	07/01/2004	-	6.75	22.30	-	0.32	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-6	10/25/2004	-	6.69	22.36	-	0.3	0.018	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	06/13/2005	-	5.43	23.62	-	0.28	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	10/11/2005	-	2.89	26.16	-	0.31	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	05/08/2006	-	2.05	-	-	0.14	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	09/15/2006	-	3.59	-	-	<0.24	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	05/15/2007	-	3.66	-	-	0.066	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	<0.0000098	<0.001	-
MW-6	08/08/2007	-	8.50	-	-	0.35	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-6	06/17/2008	-	7.65	-	-	0.48	0.03	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-6	08/29/2008	-	8.57	-	-	0.53	0.02	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-6	05/13/2009	-	9.13	-	-	0.15	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	09/09/2009	23.93	7.33	16.60	-	0.21 J	0.024 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	06/07/2010	23.93	6.26	17.67	-	1.1 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	08/03/2010	23.93	7.55	16.38	-	<0.50	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	05/17/2011	23.93	6.35	17.58	-	0.69 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	09/14/2011	23.93	1.81	22.12	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	05/31/2012	23.93	2.94	20.99	-	0.82	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	08/02/2012	23.93	6.86	17.07	-	0.45	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	05/18/2013	23.93	2.46	21.47	-	0.15 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-6[HS]	05/18/2013	23.93	2.46	21.47	-	0.37 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-6	09/15/2013	23.93	2.97	20.96	-	0.31 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-6	05/09/2014	23.93	7.15	16.78	-	0.33 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-6[HS]	05/09/2014	23.93	7.15	16.78	-	0.51	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-6	10/02/2014	23.93	6.60	17.33	-	0.26 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-6	05/04/2015	23.93	6.02	17.91	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-6	10/15/2015[2]	23.93	3.52	20.41	-	0.075 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-6	05/20/2016[2]	23.93	5.45	18.48	-	0.12 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-6	09/29/2016	23.93	4.50	19.43	-	0.10 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-6	05/10/2017	23.93	3.21	20.72	-	0.065 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-6	10/10/2017	23.93	2.20	21.73	-	<0.050	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-6	6/11/2018*	23.85	7.37	16.48		0.20 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-7	09/17/1998	91.76	-	-	-	**7.5**	**7.1**	-	**0.027**	<0.012	**0.0212**	0.052	-	-	-	-
MW-7	09/27/1998	91.76	2.28	89.48	-	-	-	-	-	-	-	-	-	-	-	-
MW-7	04/29/1999	91.76	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-7	10/14/1999	91.76	1.58	90.18	-	<0.1	<0.05	-	<0.0005	0.00062	<0.0005	0.00076	<0.005	-	-	-
MW-7	05/20/2000	91.76	3.27	88.49	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-7	09/24/2000	91.76	6.90	84.86	-	0.335	<0.05	-	0.000266	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-7	05/02/2001	196.43	2.51	193.92	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-7	09/27/2001	196.43	1.31	195.12	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-7	10/05/2001	196.43	1.48	194.95	-	0.119 / <0.1	-	-	-	-	-	-	-	-	-	-
MW-7	05/09/2002	196.43	4.65	191.78	-	0.147	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-7	09/21/2002	196.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-7	05/25/2003	196.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-7	10/03/2003	28.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-7	04/25/2004	28.57	1.53	27.04	-	0.035	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-7	07/01/2004	28.57	5.62	22.95	-	0.34	0.051	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-7	10/25/2004	28.57	4.74	23.83	-	0.2	0.025	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	06/13/2005	28.57	4.45	24.12	-	0.23	0.027	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	10/11/2005	28.57	1.39	27.18	-	0.2	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	05/08/2006	28.57	1.41	27.16	-	0.079	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	09/15/2006	28.57	1.70	26.87	-	0.11	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	05/15/2007	28.57	2.52	26.05	-	0.035	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	<0.0000097	<0.001	-
MW-7	08/08/2007	28.57	7.77	20.80	-	<0.12	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-7	06/17/2008	28.57	9.22	19.35	-	0.045	0.02	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-7	08/29/2008	28.57	11.68	16.89	-	1.2	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-7	05/13/2009	28.57	7.99	20.58	-	**1.6**	0.017	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	09/09/2009	27.07	8.88	18.19	-	0.13 J	0.018 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	06/07/2010	27.07	8.07	19.00	-	<0.25	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	08/03/2010	27.07	10.06	17.01	-	<0.50	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	05/17/2011	27.07	8.44	18.63	-	<0.50	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	09/14/2011	27.07	5.14	21.93	-	<0.047	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	05/31/2012	27.07	7.66	19.41	-	1.2	0.015 J	-	<0.0005	<0.0005	<0.0005	0.0017 J	-	-	-	-
MW-7	08/02/2012	27.07	9.32	17.75	-	0.087 J	0.019 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	05/18/2013	27.07	5.60	21.47	-	0.098 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-7[HS]	05/18/2013	27.07	5.60	21.47	-	0.73	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-7	09/15/2013	27.07	5.66	21.41	-	0.64	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-7	05/09/2014	27.07	8.89	18.18	-	0.14 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-7[HS]	05/09/2014	27.07	8.89	18.18	-	0.85	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-7	10/02/2014	27.07	6.57	20.50	-	0.24 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-7	05/04/2015	27.07	7.47	19.60	-	0.13 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-7	10/15/2015[2]	27.07	5.82	21.25	-	0.075 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-7	05/20/2016[2]	27.07	7.02	20.05	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-7	09/29/2016	21.10	5.97	15.13		<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-7	09/29/2016	27.07	5.97	21.10	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-7	05/10/2017	27.07	5.29	21.78	-	<0.053 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-7	10/09/2017	27.07	5.24	21.83	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-7	06/12/2018	27.07	8.74	18.33		0.056 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-8	09/17/1998	93.22	-	-	-	0.134	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
MW-8	09/27/1998	93.22	3.72	89.50	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	04/29/1999	93.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	10/14/1999	93.22	2.89	90.33	-	<0.1	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	-	-	-
MW-8	05/20/2000	93.22	4.32	88.90	-	<0.25	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
MW-8	09/24/2000	93.22	6.53	86.69	-	<0.1	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-8	05/02/2001	197.88	3.58	194.30	-	<0.1	<0.05	-	0.000236	<0.0005	<0.0005	0.00125	<0.001	-	-	-
MW-8	09/27/2001	197.88	3.66	194.22	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-8	10/05/2001	197.88	3.71	194.17	-	<0.113 / <0.1	-	-	-	-	-	-	-	-	-	-
MW-8	05/09/2002	197.88	5.00	192.88	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-8	09/21/2002	197.88	3.84	194.04	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-8	05/25/2003	197.88	4.65	193.23	-	0.048	0.013	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
MW-8	10/03/2003	30.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	04/25/2004	30.05	2.82	27.23	-	<0.35	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-8	07/01/2004	30.05	5.78	24.27	-	<0.24	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-8	10/25/2004	30.05	4.30	25.75	-	<0.051	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-8	06/13/2005	30.05	4.05	26.00	-	<0.037	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-

Table 2

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Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.0000750**	**0.0017**	
MW-8	10/11/2005	30.05	2.73	27.32	-	<0.084	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-8	05/08/2006	30.05	2.66	27.39	-	<0.036	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-8	09/15/2006	30.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/15/2007	30.05	3.53	26.52	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/08/2007	30.05	7.88	22.17	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	06/17/2008	30.05	9.06	20.99	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/29/2008	30.05	11.07	18.98	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/13/2009	30.05	8.25	21.80	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/09/2009	28.86	8.82	20.04	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	06/07/2010	28.86	8.35	20.51	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/03/2010	28.86	9.63	19.23	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/17/2011	28.86	8.84	20.02	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/14/2011	28.86	6.61	22.25	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/31/2012	28.86	7.47	21.39	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/02/2012	28.86	9.59	19.27	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/18/2013	28.86	6.97	21.89	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/15/2013	28.86	7.32	21.54	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/09/2014	28.86	9.00	19.86	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	10/02/2014	28.86	8.24	20.62	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/04/2015	28.86	8.08	20.78	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	10/15/2015[1]	28.86	7.57	21.29	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/20/2016[1]	28.86	8.28	20.58	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/29/2016[1]	28.86	7.78	21.08	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/10/2017[1]	28.86	7.38	21.48	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	10/09/2017[1]	28.86	7.01	21.85	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	06/11/2018[1]	28.86	8.65	20.21		-	-	-	-	-	-	-	-	-	-	-
MW-9	05/02/2001	197.90	3.59	194.31	-	0.662	**3.79**	-	**0.0114**	0.0578	**0.0816**	**0.484**	0.0619 / <0.005	-	-	-
MW-9	09/27/2001	197.90	2.35	195.55	-	-	0.0986	-	0.000853	<0.0005	<0.0005	0.00103	0.00361	-	-	-
MW-9	10/05/2001	197.90	2.31	195.59	-	0.176 / 0.194	-	-	-	-	-	-	-	-	-	-
MW-9	05/09/2002	197.90	5.71	192.19	-	1.13	**5.07**	-	**0.00699**	0.146	**0.153**	**0.763**	0.00491 / <0.05	-	-	-
MW-9	09/21/2002	197.90	3.91	193.99	-	0.705	**5.55**	-	**0.0116**	0.0639	**0.135**	**0.939**	0.00562 / <0.005	-	-	-
MW-9	05/25/2003	197.90	4.93	192.97	-	**1.7**	**5.3**	-	0.003	0.051	**0.16**	**0.97**	<0.002	-	-	-
MW-9	10/03/2003	30.05	3.23	26.82	-	**2.2**	**6.9**	-	0.004	0.053	**0.19**	**0.93**	<0.002	-	-	-
MW-9	04/25/2004	30.05	2.58	27.47	-	0.16	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-9	07/01/2004	30.05	5.63	24.42	-	**1.7**	**6.2**	-	<0.01	0.07	**0.14**	**1.0**	-	<0.0005	-	-
MW-9	10/25/2004	30.05	4.46	25.59	-	**2.5**	**6.5**	-	<0.01	0.033	**0.12**	**0.77**	-	-	-	-
MW-9	06/13/2005	30.05	3.93	26.12	-	**2.2**	**4.4**	-	<0.015	0.023	**0.12**	**0.62**	-	-	-	-
MW-9	10/11/2005	30.05	2.60	27.45	-	0.21 / 0.19	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-	-
MW-9	05/08/2006	30.05	2.31	27.74	-	0.25 / 0.23	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-	-
MW-9	09/15/2006	30.05	2.91	27.14	-	0.19	0.014	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-9	05/15/2007	30.05	3.37	26.68	-	**2.0** / **1.7**	0.6 / 0.4	-	<0.005 / <0.002	0.003 / 0.002	0.01 / 0.006	0.05 / 0.04	-	-	-	-
MW-9	08/08/2007	30.05	6.55	23.50	-	1.2 / 1.4	**2.7** / **2.8**	-	<0.02 / <0.02	0.02 / 0.02	**0.09 / 0.08**	**0.4 / 0.4**	-	-	-	-
MW-9	06/17/2008	30.05	4.88	25.17	-	1.3	1.4	-	<0.0005	0.006	**0.03**	**0.2**	-	-	-	-
MW-9	08/29/2008	30.05	6.39	23.66	-	1.3	**3.7**	-	<0.02	0.02	**0.1**	**0.5**	-	-	-	-
MW-9	05/13/2009	30.05	4.00	26.05	-	0.27	0.13	-	<0.0005	<0.0005	0.0011	0.0064	-	-	-	-
MW-9	09/09/2009	24.53	4.73	19.80	-	0.92	2.2	-	<0.020	0.0099	**0.059**	**0.37**	-	-	-	-
MW-9	06/07/2010	24.53	4.06	20.47	-	1.5	0.18	-	0.0009 J	0.0007 J	0.0024	0.0075	-	-	-	-
MW-9	08/03/2010	24.53	5.11	19.42	-	**2.5**	**2.7**	-	<0.020	0.012	**0.080**	**0.37**	-	-	-	-
MW-9	05/17/2011	24.53	4.63	19.90	-	**1.8**	0.60	-	0.0036	0.0010 J	0.0017 J	0.020	-	-	-	-
MW-9	09/14/2011	24.53	1.82	22.71	-	0.35	<0.010	-	<0.0005	<0.0005	<0.0005	0.0019 J	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-9	05/31/2012	24.53	2.95	21.58	-	**4.6**	**14**	-	**0.059**	0.074	**0.40**	**2.3**	-	-	-	-
MW-9	08/02/2012	24.53	4.93	19.60	-	**4.7**	**12**	-	**<0.054**	0.060	**0.32**	**2.0**	-	-	-	-
MW-9	05/18/2013	24.53	2.44	22.09	-	-	-	-	-	-	-	-	-	-	-	-
MW-9	05/19/2013	-	-	-	-	0.20 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-9[HS]	05/19/2013	-	-	-	-	0.38 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-9	09/15/2013	24.53	2.62	21.91	-	0.75	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-9	05/09/2014	24.53	4.61	19.92	-	0.21 J	0.071 J	-	0.00023 J	0.00023 J	0.0028	0.010	-	-	-	-
MW-9[HS]	05/09/2014	24.53	4.61	19.92	-	0.35 J	0.083 J	-	0.00024 J	0.00026 J	0.0034	0.012	-	-	-	-
MW-9	10/02/2014	24.53	3.90	20.63	-	1.1	**2.6**	-	0.0018	0.016	**0.094**	**0.52**	-	-	-	-
MW-9	05/04/2015	24.53	3.72	20.81	-	0.24 J	0.093 J	-	<0.0005	<0.0005	0.0035	0.0070	-	-	-	-
MW-9	10/15/2015[2]	24.53	3.09	21.44	-	0.15 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-9	05/20/2016[2]	24.53	3.96	20.57	-	1.3	0.61	-	0.0006 J	0.010	0.068	**0.49**	-	-	-	-
MW-9	09/29/2016	24.53	3.29	21.24	-	0.12 J	0.028 J	-	<0.0005	<0.0005	<0.0005	0.001	-	-	-	-
MW-9	05/11/2017	24.53	2.89	21.64	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-9	10/09/2017	24.53	2.40	22.13	-	0.054 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-9	06/12/2018	24.53	4.36	20.17		0.16 J	0.066 J	-	<0.0005	<0.0005	0.002	0.002	<0.0005	<0.0005	<0.0005	-
MW-10	05/02/2001	198.91	4.52	194.39	-	<0.1	<0.05	-	0.000456	0.00066	<0.0005	0.00133	<0.001	-	-	-
MW-10	09/27/2001	198.91	3.47	195.44	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-10	10/05/2001	198.91	3.49	195.42	-	<0.113 / 0.106	-	-	-	-	-	-	-	-	-	-
MW-10	05/09/2002	198.91	7.58	191.33	-	0.342	0.236	-	0.000607	0.00125	0.00342	0.00911	0.00146	-	-	-
MW-10	09/21/2002	198.91	5.13	193.78	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-10	05/25/2003	198.91	6.14	192.77	-	0.39	0.022	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
MW-10	10/03/2003	31.07	4.32	26.75	-	0.15	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
MW-10	04/25/2004	31.07	3.45	27.62	-	0.06	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-10	07/01/2004	31.07	6.84	24.23	-	0.71	0.1	-	<0.002	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-10	10/25/2004	31.07	5.65	25.42	-	0.12	0.015	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-10	06/13/2005	31.07	4.39	26.68	-	0.27	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-10	10/11/2005	31.07	3.48	27.59	-	0.19	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-10	05/08/2006	31.07	3.22	27.85	-	0.078	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-10	09/15/2006	31.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/15/2007	31.07	4.36	26.71	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	08/08/2007	31.07	9.42	21.65	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	06/17/2008	31.07	5.91	25.16	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	08/29/2008	31.07	8.93	22.14	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/13/2009	31.07	5.36	25.71	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/09/2009	25.56	5.80	19.76	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	06/07/2010	25.56	5.05	20.51	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	08/03/2010	25.56	6.15	19.41	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/17/2011	25.56	5.69	19.87	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/14/2011	25.56	2.85	22.71	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/31/2012	25.56	4.13	21.43	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	08/02/2012	25.56	5.95	19.61	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/18/2013	25.56	4.02	21.54	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/15/2013	25.56	3.68	21.88	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/09/2014	25.56	5.97	19.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	10/02/2014	25.56	4.80	20.76	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/04/2015	25.56	4.64	20.92	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	10/15/2015[1]	25.56	4.13	21.43	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/20/2016[1]	25.56	4.94	20.62	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/29/2016[1]	25.56	4.43	21.13	-	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-10	05/10/2017[1]	25.56	3.81	21.75	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	10/09/2017[1]	25.56	3.23	22.33	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	06/11/2018[1]	25.56	5.37	20.19		-	-	-	-	-	-	-	-	-	-	-
MW-11	05/02/2001	198.88	4.78	194.10	-	0.705	**7.86**	-	**0.0143**	0.0606	**0.0773**	**0.286**	0.113 / <0.005	-	-	-
MW-11	09/27/2001	198.88	3.26	195.62	-	-	0.238	-	0.00306	0.000616	<0.0005	0.00192	0.00808 / <0.005	-	-	-
MW-11	10/05/2001	198.88	3.27	195.61	-	0.117 / 0.187	-	-	-	-	-	-	-	-	-	-
MW-11	05/09/2002	198.88	7.31	191.57	-	**4.98**	**19.3**	-	**0.0134**	0.00725	**0.671**	**3.0**	0.109 / <0.25	-	-	-
MW-11	09/21/2002	198.88	5.28	193.60	-	0.78	**7.94**	-	**0.0109**	0.00659	**0.145**	**0.587**	0.0935 / <0.05	-	-	-
MW-11	05/25/2003	198.88	6.57	192.31	-	**6.4 / 6.4**	**13.0 / 11.0**	-	0.004 / 0.004	0.28 / 0.28	**0.53 / 0.51**	**2.2 / 2.3**	<0.002 / <0.002	-	-	-
MW-11	10/03/2003	31.04	3.71	27.33	-	**3.2**	**8.1**	-	0.002	0.16	**0.23**	**0.97**	<0.002	-	-	-
MW-11	04/25/2004	31.04	3.29	27.75	-	0.095	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-11	07/01/2004	31.04	6.95	24.09	-	**2.5**	**11.0**	-	<0.01	0.14	**0.38**	**1.7**	-	<0.0005	-	-
MW-11	10/25/2004	31.04	6.06	24.98	-	**2.9**	**10.0**	-	<0.02	0.042	**0.18**	**0.71**	-	-	-	-
MW-11	06/13/2005	31.04	5.09	25.95	-	**2.0**	**8.1**	-	<0.015	0.04	**0.23**	**0.98**	-	-	-	-
MW-11	10/11/2005	31.04	3.39	27.65	-	0.1	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	05/08/2006	31.04	3.15	27.89	-	0.16	0.35	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	09/15/2006	31.04	2.70	28.34	-	0.11	0.022	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	05/15/2007	31.04	4.27	26.77	-	1.3	0.5	-	<0.005	<0.001	<0.001	<0.002	-	-	-	-
MW-11	08/08/2007	31.04	9.49	21.55	-	1.5	**6.5**	-	<0.03	0.02	**0.2**	**1.0**	-	-	-	-
MW-11	06/17/2008	31.04	6.49	24.55	-	**2.0**	**10.0**	-	**0.03**	0.03	**0.3**	**1.3**	-	-	-	-
MW-11	08/29/2008	31.04	9.04	22.00	-	**20.0**	**7.3**	-	<0.02	0.02	**0.2**	**1.1**	-	-	-	-
MW-11	05/13/2009	31.04	5.86	25.18	-	**2.1**	**12**	-	<0.020	0.026	**0.39**	**1.6**	-	-	-	-
MW-11	09/09/2009	25.52	6.66	18.86	-	**2.3**	**13**	-	<0.10	0.040	**0.44**	**2.1**	-	-	-	-
MW-11	06/07/2010	25.52	5.39	20.13	-	<0.25	0.018 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	08/03/2010	25.52	6.34	19.18	-	**4.4**	**11**	-	<0.10	0.027	**0.38**	**1.6**	-	-	-	-
MW-11	05/17/2011	25.52	6.01	19.51	-	**2.7 / 2.7**	**6.0 / 7.6**	-	<0.050 / <0.10	0.011 / 0.012	**0.091 / 0.10**	**0.34 / 0.41**	-	-	-	-
MW-11	09/14/2011	25.52	2.58	22.94	-	0.17 J / 0.23 J	0.039 J / 0.027 J	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-	-
MW-11	05/31/2012	25.52	3.90	21.62	-	1.0	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	08/02/2012	25.52	6.06	19.46	-	0.63	1.5	-	<0.017	0.0021	0.0059	0.015	-	-	-	-
MW-11	05/18/2013	25.52	3.63	21.89	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	05/19/2013	-	-	-	-	0.15 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-11[HS]	05/19/2013	-	-	-	-	0.35 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-11	09/15/2013	25.52	3.59	21.93	-	**2.4**	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-11	05/09/2014	25.52	7.31	18.21	-	**2.7**	**5.8 J**	-	0.00061 J	0.013	**0.15**	**0.64**	-	-	-	-
MW-11[HS]	05/09/2014	25.52	7.31	18.21	-	**2.3**	**2.7**	-	0.00019 J	0.0041	**0.051**	**0.28**	-	-	-	-
MW-11	10/02/2014	25.52	5.09	20.43	-	0.27 J	0.18	-	<0.00015	<0.00011	0.00040 J	<0.00040	-	-	-	-
MW-11	05/04/2015	25.52	4.72	20.80	-	<0.054	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-11	10/15/2015	25.52	4.10	21.42	-	<0.050	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-11	05/20/2016	25.52	5.11	20.41	-	0.076 J	0.14	-	<0.0005	<0.0005	0.002	0.007	-	-	-	-
MW-11	09/29/2016	25.52	4.39	21.13	-	0.21 J	0.84	-	<0.0005	<0.0005	0.009	0.028	-	-	-	-
MW-11	05/11/2017	25.52	3.75	21.77	-	0.088 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-11	10/09/2017	25.52	3.31	22.21	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-11	06/11/2018	25.52	6.55	18.97		**6.8 J**	**20**	-	0.004 J	0.077	**1.0**	**4.3**	<0.003	<0.003	<0.003	-
MW-12	05/02/2001	198.08	4.03	194.05	-	<0.1	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-12	09/27/2001	198.08	2.54	195.54	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
MW-12	10/05/2001	198.08	2.57	195.51	-	<0.113 / <0.1	-	-	-	-	-	-	-	-	-	-
MW-12	05/09/2002	198.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	09/21/2002	198.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	05/25/2003	198.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-12	10/03/2003	30.24	4.37	25.87	-	0.13	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
MW-12	04/25/2004	30.24	2.70	27.54	-	0.038	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-12	07/01/2004	30.24	6.76	23.48	-	0.29	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
MW-12	10/25/2004	30.24	6.77	24.83	-	0.091	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	06/13/2005	30.24	4.88	25.36	-	1.4	0.013	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	10/11/2005	30.24	2.66	27.58	-	0.095	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	05/08/2006	30.24	2.50	27.74	-	0.047	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	09/15/2006	30.24	3.07	27.17	-	0.091	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	05/15/2007	30.24	3.54	26.70	-	0.038	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-12	08/08/2007	30.24	8.78	21.46	-	<0.24	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-12	06/17/2008	30.24	5.99	24.25	-	<0.12	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-12	08/29/2008	30.24	9.04	21.20	-	<0.5	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
MW-12	05/13/2009	30.24	4.96	25.28	-	0.11	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	09/09/2009	24.72	5.83	18.89	-	0.074 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	06/07/2010	24.72	5.11	19.61	-	0.077 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	08/03/2010	24.72	5.88	18.84	-	0.077 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	05/17/2011	24.72	5.53	19.19	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	09/14/2011	24.72	1.94	22.78	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	05/31/2012	24.72	3.25	21.47	-	1.3	0.016 J	-	<0.0005	<0.0005	<0.0005	0.0025 J	-	-	-	-
MW-12	08/02/2012	24.72	5.60	19.12	-	0.39	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	05/19/2013	24.72	3.08	21.64	-	0.064 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-12[HS]	05/19/2013	24.72	3.08	21.64	-	0.64	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-12	09/15/2013	24.72	2.99	21.73	-	**1.6**	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-12	05/09/2014	24.72	6.48	18.24	-	<0.068	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-12[HS]	05/09/2014	24.72	6.48	18.24	-	0.25 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-12	10/02/2014	24.72	4.48	20.24	-	0.11 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-12	05/04/2015	24.72	4.00	20.72	-	0.13 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-12	10/15/2015[2]	24.72	3.41	21.31	-	0.061 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-12	05/20/2016[2]	24.72	4.31	20.41	-	0.13 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-12	09/29/2016	24.72	3.71	21.01	-	0.11 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-12	05/11/2017	24.72	3.10	21.62	-	0.053 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-12	10/09/2017	24.72	2.64	22.08	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-12	06/11/2018	24.72	5.19	19.53		<0.051 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-13	06/13/2005	29.80	4.00	25.80	-	**15.0** / **14.0**	**3.0** / **2.9**	-	<0.01 / <0.01	0.0091 / 0.0091	**0.032 / 0.03**	0.18 / 0.17	-	-	-	-
MW-13	10/11/2005	29.80	2.48	27.32	-	0.64 / 0.54	<0.01 / 0.019	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0021	-	-	-	-
MW-13	05/08/2006	29.80	2.49	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	09/15/2006	29.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	05/15/2007	29.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	08/08/2007	29.80	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	06/17/2008	29.80	8.31	24.33	-	**4.7** / **4.2**	0.6 / 0.5	-	0.002 / <0.0005	0.004 / 0.0004	**0.02 / 0.02**	0.07 / 0.07	-	-	-	-
MW-13	08/29/2008	29.80	8.31	21.49	-	**10** / **14**	**4.6** / **4.2**	-	<0.02 / <0.02	0.02 / 0.02	**0.1 / 0.1**	**0.5 / 0.5**	-	-	-	-
MW-13	05/13/2009	29.80	4.04	25.76	-	**3.7**	0.24	-	<0.0005	0.0008	0.0012	0.0077	-	-	-	-
MW-13	09/09/2009	24.35	5.00	19.35	-	**1.7 J** / **2.5 J**	0.19 J / **12 J**	-	<<0.0005J / <0.080 UJ	0.0073 J / 0.040 J	0.0046 J / 0.44 J	0.030 J / **2.0 J**	-	-	-	-
MW-13	06/07/2010	24.35	4.18	20.17	-	0.97 / 0.96	<0.010 / 0.029 J	-	<0.0005 / <0.0005	<0.0005 / 0.0010 J	<0.0005 / 0.0009 J	<0.0015J / 0.0034 J	-	-	-	-
MW-13	08/03/2010	24.35	5.24	19.11	-	**2.4** / **2.8**	0.034 J / 0.032 J	-	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0017 J / 0.0017 J	0.0087 / 0.0085	-	-	-	-
MW-13	05/17/2011	24.35	4.80	19.55	-	**9.2**	0.054 J	-	<0.0005	<0.0005	<0.0005	0.0017 J	-	-	-	-
MW-13	09/14/2011	24.35	1.56	22.79	-	**1.7**	0.017 J	-	<0.0005	0.0005 J	<0.0005	<0.0015	-	-	-	-
MW-13	05/31/2012	24.35	2.51	21.84	-	**3.0**	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-13	08/02/2012	24.35	5.08	19.27	-	**3.0**	0.044 J	-	<0.0005	0.0005 J	0.001 J	0.0048 J	-	-	-	-
MW-13	05/18/2013	24.35	2.02	22.33	-	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-13	05/19/2013	-	-	-	-	0.56 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-13[HS]	05/19/2013	-	-	-	-	0.76	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-13	09/15/2013	24.35	2.56	21.79	-	0.53	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-13	05/09/2014	24.35	5.41	18.94	-	**2.9**	0.10	-	<0.00015	0.00014 J	0.00072 J	0.0041	-	-	-	-
MW-13[HS]	05/09/2014	24.35	5.41	18.94	-	**3.3**	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-13	10/02/2014	24.35	4.06	20.29	-	0.79	<0.050	-	0.00030 J	0.0012	0.00022 J	<0.00040	-	-	-	-
MW-13	05/04/2015	24.35	3.80	20.55	-	0.18 J	0.010 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-13	10/15/2015	24.35	2.99	21.36	-	0.071 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-13	05/20/2016	24.35	4.04	20.31	-	0.11 J / 0.16 J	0.015 J / 0.015 J	-	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0006 J / 0.0006 J	0.001 / 0.001	-	-	-	-
MW-13	09/30/2016	24.35	3.52	20.83	-	0.28	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-13	05/10/2017	24.35	2.79	21.56	-	0.19 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-13	10/09/2017	24.35	2.23	22.12	-	0.078 J / 0.087 J	<0.010 / <0.010	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	-
MW-13	06/11/2018	24.35	4.49	19.86		0.95 J / 1.0 J	1.8 / 1.8	--	<0.0005 / <0.0005	0.061 / 0.074	**0.026 / 0.028**	0.12 / 0.13	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	-
MW-14	06/17/2008	-	6.03	-	-	**4.7**	**40.0**	-	**0.07**	**1.7**	**1.2**	**5.3**	-	-	-	-
MW-14	08/29/2008	-	8.61	-	-	**4.9**	**25.0**	-	<0.1	**1.1**	**0.8**	**3.4**	-	-	-	-
MW-14	05/13/2009	-	6.75	-	-	**7.6 J / 3.5 J**	**45 J / 43**	-	**0.058 J / 0.041 J**	**3.0 / 2.8 J**	**1.3 / 1.1**	**6.9 / 5.5**	-	-	-	-
MW-14	09/09/2009	24.35	7.64	16.71	-	**84**	**56**	-	<0.060	**4.2**	**1.7**	**9.7**	-	-	-	-
MW-14	06/07/2010	24.35	6.92	17.43	-	-	-	-	-	-	-	-	-	-	-	-
MW-14*	08/03/2010	24.35	7.85	16.73	0.28	-	-	-	-	-	-	-	-	-	-	-
MW-14	05/17/2011	24.35	6.33	18.02	-	**130**	**17**	-	<0.10	0.76	**0.25**	**2.5**	-	-	-	-
MW-14	09/14/2011	24.35	1.96	22.39	-	**150**	**3.2**	-	**0.0062**	0.0058	0.0033	0.014	-	-	-	-
MW-14	05/31/2012	24.35	6.03	18.32	-	**35 / 38**	1.1 / 0.95	-	0.0029 / 0.0027	0.0031 / 0.0027	0.0016 J / 0.0015 J	0.0039 J / 0.0046 J	-	-	-	-
MW-14	08/02/2012	24.35	6.55	17.80	-	**15 / 11**	**12 / 12**	-	**<0.045 / <0.059**	0.24 / 0.22	**0.16 / 0.15**	**0.86 / 0.81**	-	-	-	-
MW-14	05/18/2013	24.35	2.91	21.44	-	-	-	-	-	-	-	-	-	-	-	-
MW-14	05/19/2013	-	-	-	-	**3.4 J 1.9 J**	1.7 J /2.2 J	-	<0.00024 / <0.00024	0.00074 J / 0.00074 J	0.0021 / 0.0021	0.016 / 0.016	-	-	-	-
MW-14[HS]	05/19/2013	-	-	-	-	0.79 / 0.53	<0.050 / <0.050	-	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	-	-	-	-
MW-14	09/15/2013	24.35	3.19	21.16	-	**13.2 / 8.4**	0.45 / 0.32	-	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	-	-	-	-
MW-14	05/09/2014	24.35	7.34	17.01	-	**20.8 J / 11.7 J**	**11.2 J / 10.9**	-	0.0024 J / 0.0027 J	0.63 / 1.0	**0.18 / 0.24**	**1.1 / 1.4**	-	-	-	-
MW-14[HS]	05/09/2014	24.35	7.34	17.01	-	**41.3 J / 261 J**	**2.8 / 3.1**	-	0.0012 / 0.0011	0.099 / 0.098	**0.031 / 0.032**	**0.33 / 0.33**	-	-	-	-
MW-14	10/02/2014	24.35	6.85	17.50	-	**1.8/2.2**	**3.1/2.7**	-	0.00060 J/0.00060 J	0.043/0.034 J	**0.028/0.017 J**	0.14/0.089 J	-	-	-	-
MW-14	05/04/2015	24.35	5.90	18.45	-	0.66 / 0.65	0.13 / 0.15	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-	-
MW-14	10/15/2015	24.35	3.97	20.38	-	0.21 J / 0.27	<0.010 / <0.010	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	<0.0025 / <0.0025	-	-	-
MW-14	05/20/2016	24.35	5.43	18.92	-	0.50	0.039 J	-	<0.0005	0.0008 J	<0.0005	0.0009 J	-	-	-	-
MW-14	09/30/2016	24.35	5.63	18.72	-	0.34 / 0.39	0.58 / 0.56	-	<0.0005 / <0.0005	0.017 / 0.016	0.01 / 0.01	0.051 / 0.047	-	-	-	-
MW-14	05/11/2017	24.35	2.88	21.47	-	0.11 J / 0.13 J	<0.010 / <0.010	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	-
MW-14	10/09/2017	24.35	2.64	21.71	-	0.088 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-14	06/12/2018	24.35	7.29	17.06		**2.5 J**	0.013 J	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-15	09/09/2009	24.25	8.69	15.56	-	0.057 J	0.013 J	-	<0.0005	<0.0005	<0.0005	0.0022 J	-	-	-	-
MW-15	06/07/2010	24.25	7.98	16.27	-	<0.25	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	08/03/2010	24.25	9.16	15.09	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	05/17/2011	24.25	7.78	16.47	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	09/14/2011	24.25	5.40	18.85	-	<0.047	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	05/31/2012	24.25	8.11	16.14	-	0.88	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	08/02/2012	24.25	7.05	17.20	-	<0.047	0.011 J	-	<0.0005	<0.0005	<0.0005	0.0017 J	-	-	-	-
MW-15	05/18/2013	24.25	7.51	16.74	-	<0.40	<0.050	<0.40	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-15[HS]	05/18/2013	24.25	7.51	16.74	-	<0.43	<0.050	0.81 J	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-15	09/15/2013	24.25	7.95	16.30	-	0.23 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-15	05/09/2014	24.25	8.56	15.69	-	<0.068	<0.0<50J	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-15[HS]	05/09/2014	24.25	8.56	15.69	-	<0.063	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
MW-15	10/02/2014	24.25	9.08	15.17	-	0.082 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-15	05/04/2015	24.25	8.49	15.76	-	0.12 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-15	10/15/2015[2]	24.25	7.15	17.10	-	<0.050	0.014 J	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-15	05/20/2016[2]	24.25	7.93	16.32	-	0.089 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-15	09/29/2016	24.25	8.01	16.24	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-15	05/10/2017	24.25	7.01	17.24	-	<0.051 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-15	10/10/2017	24.25	7.07	17.18	-	<0.050	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-15	06/11/2018	24.25	8.96	15.29		<0.051 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-16	09/09/2009	23.61	8.08	15.53	-	0.066 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	06/07/2010	23.61	7.41	16.20	-	0.059 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	08/03/2010	23.61	8.51	15.10	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	05/17/2011	23.61	7.27	16.34	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	09/14/2011	23.61	4.91	18.70	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	05/31/2012	23.61	6.82	16.79	-	0.75	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	08/02/2012	23.61	6.72	16.89	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	05/18/2013	23.61	7.21	16.40	-	<0.39	<0.050	<0.39	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-16[HS]	05/18/2013	23.61	7.21	16.40	-	<0.40	<0.050	<0.40	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-16	09/15/2013	23.61	7.54	16.07	-	<0.21	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
MW-16	05/09/2014	23.61	8.11	15.50	-	<0.063	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-16[HS]	05/09/2014	23.61	8.11	15.50	-	<0.060	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-16	10/02/2014	23.61	8.65	14.96	-	0.076 J	<0.050	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-	-
MW-16	05/04/2015	23.61	8.10	15.51	-	0.089 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
MW-16	10/15/2015[2]	23.61	6.82	16.79	-	<0.050	0.010 J	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0025	-	-	-
MW-16	05/20/2016[2]	23.61	7.64	15.97	-	<0.052	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-16	09/29/2016	23.61	7.80	15.81	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
MW-16	05/10/2017	23.61	6.93	16.68	-	<0.052 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-16	10/10/2017	23.61	6.95	16.66	-	<0.051	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
MW-16	06/11/2018	23.61	8.67	14.94		<0.052 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-
DWW-1	10/10/2011	-	9.88	-	-	<0.052 / <0.052	<0.010 / <0.010	-	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0003	-	-	-	-
DWW-1	05/31/2012	-	9.39	-	-	0.18 J / 0.32	<0.010 / <0.010	0.22 J / 0.37	<0.0001 / <0.0001	<0.0001 / 0.0001 J	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	-	-
DWW-1	08/02/2012	-	8.88	-	-	<0.052 / <0.051	<0.010 / <0.010	<0.073 / <0.071	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	-	-
DWW-1	05/18/2013	-	9.78	-	-	<0.42 / <0.43	<0.050 / <0.050	<0.42 / <0.43	<0.000047 / <0.000047	0.00011 J / <0.000065	<0.000078 / <0.000078	<0.00027 / <0.00027	-	-	-	-
DWW-1[HS]	05/18/2013	-	9.78	-	-	<0.40 / <0.42	<0.050 / <0.050	<0.40 / <0.42	<0.000047 / <0.000047	0.00012 J / <0.000065	<0.000078 / <0.000078	<0.00027 / <0.00027	-	-	-	-
DWW-1	09/15/2013	-	10.01	-	-	0.41 J / 0.44	<0.050 / <0.050	0.66 / 0.72	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	-	-	-	-
DWW-1	05/09/2014	-	10.48	-	-	<0.065 / <0.065	<0.050J / <0.050J	<0.033 / 0.036 J	<0.000073 / <0.000073	<0.00011 / <0.00011	<0.000096 / <0.000096	<0.00020 / <0.00020	-	-	-	-
DWW-1[HS]	05/09/2014	-	10.48	-	-	<0.060 / <0.060	<0.050 / <0.050	<0.21J / 0.63 J	<0.000073 / <0.000073	<0.00011 / <0.00011	<0.000096 / <0.000096	<0.00020 / <0.00020	-	-	-	-
DWW-1	10/02/2014	-	11.02	-	-	0.093 J/0.11 J	<0.050/<0.050	<0.030/<0.030	<0.000073/<0.000073	<0.00011/<0.00011	<0.000096/<0.000096	<0.00020/<0.00020	-	-	-	-
DWW-1	05/04/2015	-	10.45	-	-	<0.047 / <0.047	<0.010 / <0.010	<0.066 / <0.066	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	-	-	-	-	-
DWW-1	10/15/2015[2]	-	9.06	-	-	<0.049 / <0.050	<0.010 / <0.010	<0.069 / <0.069	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0002/<0.0002	-	-	-	-
DWW-1	05/20/2016[2]	-	-	-	-	<0.050 / <0.052	-	<0.073/<0.070	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	-	-
DWW-1	09/29/2016[2]	-	-	-	-	0.071 J / 0.077 J	<0.010 / <0.010	<0.076 / <0.075	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	<0.0001 / <0.0001	-
DWW-1	05/10/2017[2]	-	8.91	-	-	0.37 J / 0.37 J	<0.010 / <0.010	-	<0.0001 / <0.0001	0.0002 J / 0.0002 J	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	-	-
DWW-1	10/10/2017	-	-	-	-	<0.051 / <0.050	<0.010 / <0.010	-	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0003 / <0.0003	-	-	-	-
DWW-1	06/12/2018	-	-	-		<0.055 / <0.052	--	<0.083 / <0.077	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	-	-	-	-
Trip Blank	09/14/1995	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-
Trip Blank	05/31/1996	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
Trip Blank	08/22/1996	-	-	-	-	-	<0.05	-	<0.0005	0.000683	<0.0005	<0.001	-	-	-	-
Trip Blank	10/22/1996	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						1.5	2.2	1.1	0.0046	1.1	0.015	0.19	0.14	0.0000750	0.0017	
Trip Blank	04/26/1997	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
Trip Blank	09/09/1997	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
Trip Blank	04/19/1998	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-
Trip Blank	04/29/1999	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	-	-	-
Trip Blank	10/14/1999	-	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	-	-	-
Trip Blank	05/20/2000	-	-	-	-	-	<0.08	-	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	-	-	-
Trip Blank	09/24/2000	-	-	-	-	-	<0.05	-	<0.0002	0.000873	<0.0005	<0.001	<0.001	-	-	-
Trip Blank	05/02/2001	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-
Trip Blank	09/27/2001	-	-	-	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
Trip Blank	05/09/2002	-	-	-	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	<0.001	-	-	-
Trip Blank	09/21/2002	-	-	-	-	-	<0.05	-	<0.0002	0.000562	<0.0005	<0.001	<0.001	-	-	-
Trip Blank	05/25/2003	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
Trip Blank	10/03/2003	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	-	-	-
Trip Blank	04/25/2004	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Trip Blank	07/01/2004	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	<0.0005	-	-
Trip Blank	10/25/2004	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	06/13/2005	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	10/11/2005	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	05/08/2006	-	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	09/15/2006	-	-	-	-	<0.023	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	05/15/2007	-	-	-	-	-	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
Trip Blank	08/08/2007	-	-	-	-	-	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
Trip Blank	06/17/2008	-	-	-	-	-	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
Trip Blank	08/29/2008	-	-	-	-	-	<0.01	-	<0.001	<0.001	<0.001	<0.002	-	-	-	-
Trip Blank	04/30/2009	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	09/02/2009	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	06/07/2010	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	08/03/2010	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	05/17/2011	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	09/14/2011	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-	-
Trip Blank	10/10/2011	-	-	-	-	-	<0.010	-	<0.0001	<0.0001	<0.0001	<0.0003	-	-	-	-
Trip Blank	05/31/2012	-	-	-	-	-	<0.010	-	<0.0005 / <0.0001	<0.0005 / <0.0001	<0.0005 / <0.0001	<0.0015 / <0.0003	-	-	-	-
Trip Blank	08/02/2012	-	-	-	-	-	<0.010	-	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0003 / <0.0015	-	-	-	-
Trip Blank-1	05/18/2013	-	-	-	-	-	-	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
Trip Blank-2	05/18/2013	-	-	-	-	-	-	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
Trip Blank-3	05/19/2013	-	-	-	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
Trip Blank-4	05/19/2013	-	-	-	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
Trip Blank	09/15/2013	-	-	-	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-
Trip Blank-1	05/09/2014	-	-	-	-	-	<0.050	-	<0.000073 / <0.00015	<0.00011 / <0.00011	<0.000096 / <0.00016	<0.00020 / <0.00040	-	-	-	-
Trip Blank-2	05/09/2014	-	-	-	-	-	<0.050	-	<0.000073 / <0.00015	<0.00011 / <0.00011	<0.000096 / <0.00016	<0.00020 / <0.00040	-	-	-	-
Trip Blank-3	05/09/2014	-	-	-	-	-	<0.050	-	<0.000073 / <0.00015	<0.00011 / <0.00011	<0.000096 / <0.00016	<0.00020 / <0.00040	-	-	-	-
Trip Blank-4	05/09/2014	-	-	-	-	-	<0.050	-	<0.000073 / <0.00015	<0.00011 / <0.00011	<0.000096 / <0.00016	<0.00020 / <0.00040	-	-	-	-
Trip Blank-1	10/02/2014	-	-	-	-	-	<0.050	-	<0.00015/<0.000073	<0.00011/<0.00011	<0.000096/<0.00016	<0.00020/<0.00040	-	-	-	-
Trip Blank-2	10/02/2014	-	-	-	-	-	<0.050	-	<0.000073/<0.00015	0.00013 J/0.00013 J	<0.000096/<0.00016	<0.00020/<0.00040	-	-	-	-
Trip Blank-1	05/04/2015	-	-	-	-	-	<0.010	-	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0015 / <0.0015	-	-	-	-
Trip Blank-2	05/04/2015	-	-	-	-	-	<0.010	-	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0015 / <0.0015	-	-	-	-
Trip Blank	10/15/2015	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0003	-	-	-	-
Trip Blank	05/20/2016	-	-	-	-	-	<0.010	-	<0.0001	<0.0001	<0.0001	<0.0003	-	-	-	-
Trip Blank	09/30/2016	-	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-
Trip Blank	5/11/2017	-	-	-		-	<0.010	-	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.003 / <0.0005	<0.0005	<0.0005	<0.0005	-
Trip Blank	10/10/2017	--	--	--	--	--	<0.010	--	<0.0001 / <0.0005	0.0005 J / <0.0005	<0.0001 / <0.0005	<0.0003 / <0.0005	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

						HYDROCARBONS			PRIMARY VOCS					ADDITIONAL VOCS		GENCHEM
Location	Date	TOC	DTW	GWE	LT	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDB	1,2-DCA	TDS
	Units	ft msl	ft btoc	ft msl	ft	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels 2017[a]						**1.5**	**2.2**	**1.1**	**0.0046**	**1.1**	**0.015**	**0.19**	**0.14**	**0.0000750**	**0.0017**	
Trip Blank	06/12/2018	-	-	-		-	<0.010	-	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0001 / <0.0005	<0.0005	-	<0.0005	-

Notes and Abbreviations

TOC = top of casing
DTW = depth to water
GWE = groundwater elevation
LT = LNAPL thickness
TPH = total petroleum hydrocarbons
DRO = diesel range organics by Alaska Series Method AK102
GRO = gasoline range organics by Alaska Series Method AK101
RRO = residual range organics by Alaska Series Method AK103
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
EDB = ethylene dibromide
1,2-DCA = 1,2-dichloroethane
TDS = total dissolved solids
ADEC = Alaska Department of Environmental Conservation
[a] = 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
ND = Not detected
<x = Constituent not detected above x milligrams per liter
x / y = Sample results / blind duplicate results
Groundwater data from 1995 through 2006 by previous consultants
HS = collected via hydrasleeve
* TOC adjusted for 1" cut in order for lid to be placed back on.
1 - Monitor only
2 - No purge method
3 - Unable to locate well

Appendix A
Site Photographs

1. MW-15

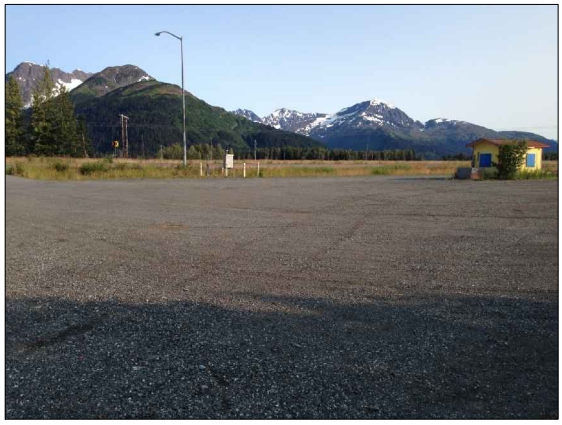
2. MW-16

FORMER CHEVRON-BRANDED STATION 92609
SEWARD HIGHWAY MILE 79
GIRDWOOD, ALASKA

620911-95

Dec 9, 2016

SITE PHOTOGRAPHS



1. View of Site facing east

2. View of Site facing north

3. View of Site facing south

4. View of Site facing west

FORMER CHEVRON-BRANDED SERVICE STATION 92609
SEWARD HIGHWAY MILE 79
GIRDWOOD, ALASKA

620911-95

Dec 9, 2016

SITE PHOTOGRAPHS

Appendix B
Human Health Conceptual Site Model Scoping and Graphics Forms

Print Form

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Chevron 92609

File Number: 2110.38.007

Completed by: Siobhan Pritchard

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, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

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

1. General Information:

Sources *(check potential sources at the site)*

- ☒ USTs
- ☐ ASTs
- ☒ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☐ Other:

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

- ☐ Spills
- ☒ Leaks
- ☐ Direct discharge
- ☐ Burning
- ☐ Other:

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

- ☐ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☐ Air
- ☐ Sediment
- ☐ Groundwater
- ☐ Surface water
- ☐ Biota
- ☐ Other:

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

- ☒ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☒ Recreational user
- ☐ Farmer
- ☐ 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

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☐

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

Comments:

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 DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

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

Comments:

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

Comments:

3. Ingestion of Wild and Farmed Foods

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

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☐

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☐

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

Comments:

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

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

Comments:

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

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

Comments:

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

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

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

Comments:

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

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

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- 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 (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

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 some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

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

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

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.)*

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Chevron 92609
File ID: 2110.38.007

Completed By: Siobhan Pritchard
Date Completed: 8/2/17

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

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

Media	Transport Mechanisms
☐ Surface Soil (0-2 ft bgs)	☐ Direct release to surface soil → check soil ☐ Migration to subsurface → check soil ☐ Migration to groundwater → check groundwater ☐ Volatilization → check air ☐ Runoff or erosion → check surface water ☐ Uptake by plants or animals → check biota ☐ Other (list):
☑ Subsurface Soil (2-15 ft bgs)	☐ Direct release to subsurface soil → check soil ☑ Migration to groundwater → check groundwater ☑ Volatilization → check air ☐ Uptake by plants or animals → check biota ☐ Other (list):
☐ Ground-water	☐ Direct release to groundwater → check groundwater ☐ Volatilization → check air ☐ Flow to surface water body → check surface water ☐ Flow to sediment → check sediment ☐ Uptake by plants or animals → check biota ☐ Other (list):
☐ Surface Water	☐ Direct release to surface water → check surface water ☐ Volatilization → check air ☐ Sedimentation → check sediment ☐ Uptake by plants or animals → check biota ☐ Other (list):
☐ Sediment	☐ Direct release to sediment → check sediment ☐ Resuspension, runoff, or erosion → check surface water ☐ Uptake by plants or animals → check biota ☐ Other (list):

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *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.*

Current & Future Receptors

Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ soil	☑ Incidental Soil Ingestion	F	F	C/F	F			
	☐ Dermal Absorption of Contaminants from Soil							
	☐ Inhalation of Fugitive Dust							
☑ groundwater	☑ Ingestion of Groundwater	F	F	C/F	F			
	☐ Dermal Absorption of Contaminants in Groundwater							
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ air	☑ Inhalation of Outdoor Air	F	F	C/F	F			
	☑ Inhalation of Indoor Air	F	F	C/F	F			
	☐ Inhalation of Fugitive Dust							
☐ surface water	☐ Ingestion of Surface Water							
	☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Inhalation of Volatile Compounds in Tap Water							
☐ sediment	☐ Direct Contact with Sediment							
☐ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Appendix C
Monitoring Data Package

DAILY FIELD REPORT

Project Name: CEMC 92609	GHD Project Manager: S. PRITCHARD	Field Rep: O.YAN / T. WEAVER
Project Number: 620911	Date: 6/11/18	Site Address: MILE 79 SEWARD HWY PORTAGE, AK
Scope of Work: PERFORM GW MONITORING/SAMPLING — GAUGE WELLS COLLECT GW SAMPLES		
Equipment: YSI-556 (D2373AW), WATER LEVEL METER (06714), TURBIDITY METER (20140708), MP-50		Weather: RAIN / CLOUDY

Time	Activity/Comments	SWA
0740	LOAD UP VEHICLE W/ EQUIPMENT THEN MOB TO TTT TO PICK UP	
	RENTAL EQUIPMENT	
0800	PICKED UP RENTAL EQUIPMENT AT TTT	
0820	MOB TO SITE	
0917	ARRIVE ONSITE — NOTIFY PM.; CONDUCT TAILGATE SAFETY MEETING;	
	NOTE THAT GRANITE TRUCKS ARE PARKED WHERE MW-6 IS LOCATED	
0932	NOTIFY GRANITE THAT TRUCK / VEHICLE ARE PARKED ONSITE	
	↳ THEY WILL CALL THE PERSON TO MOVE VEHICLE.	
0940	EMPLOYEE MOVING TRUCK N.O.	
0953	START GAUGING ALL SITE WELLS, FINISH @ 1045	
1100	LOW FLOW PURGE PARAMETER MONITORING @ MW-16	
1115	T. WEAVER CLEAR BRUSH AROUND MW-15, MW-16, MW-3, MW-7	
	& MW-8 USING SHEARS.	
1137	COLLECT SAMPLE MW-6-W-180611 FROM MW-6, DECON EQUIPMENT	
	& FILTER PURGE WATER THRU GAC.	
1158	BREAK FOR LUNCH	
1216	START MONITORING LOW FLOW PURGE PARAMETERS @ MW-15	
1225	T. WEAVER CUT 1.0 INCHES OFF OF MW-8 WELL CASING SO LID	
	WELL SHUT & LOCK W/ J-PLUG	
1248	COLLECT SAMPLE MW-15-W-180611 FROM MW-15 DECON	
	EQUIPMENT & FILTER PURGE THROUGH GAC	
1305	START LOW FLOW PURGE PARAMETER MONITORING @ MW-6	
1320	T. WEAVER CUT LOCK ON MW-10 TO TIGHTEN J-PLUG, REPLACE LOCK	
1338	COLLECT SAMPLE MW-6-W-180611 FROM MW-6, DECON	
	EQUIPMENT & PURGE THRU GAC	
	↳ DRAWDOWN WHILE PURGING MW-6 WAS 0.77' WITH PUMP	
	SET AS LOW AS POSSIBLE.	

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: X GAC Tracker: X Disposal Log: N/A Lab COC Review: N/A

Project Number: 620911 Date: 6/11/18

Time	Activity/Comments	SWA
1402	START LOW LOW PURGE PARAMETER MONITORING @ MW-12	
1420	T.WEAVER REPLACE 5-PLUG FOR MW-1 W/ LOCK	
1434	COLLECT SAMPLE MW-12-W-180611 FROM MW-12, DEION	
	EQUIPMENT, FILTER PURGE THRU GAL	
1447	START LOW FLOW PURGE PARAMETER MONITORING @ MW-11	
1500	SET HYDRASLEEVE in DWW-1	
1520	COLLECT SAMPLE MW-11-W-180611 FROM MW-11	
	DEION EQUIPMENT & FILTER PURGE THROUGH GAC	
1542	LOW FLOW PURGE PARAMETER MONITORING @ MW-13	
1615	COLLECT SAMPLES MW-13-W-180611 & DUP-1-W-180611 FROM MW-13	
	DEION EQUIPMENT & FILTER PURGE THROUGH GAC 1.8 GAL	
1640	LOAD TRUCK & MOB BACK TO OFFICE	
1745	ARRIVE @ OFFICE & PUT SAMPLES IN FRIDGE.	
	PURGED DECON/PURGE GW THROUGH GAC: 6.35 GAL	
	(1.8) (4.55)	

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

DAILY FIELD REPORT

Project Name: CEHC 92607	GHD Project Manager: S. PRITCHARD	Field Rep: O.YAN/S. PRITCHARD
Project Number: 620911	Date: 6/12/18	Site Address: MILE 79 SEWARD HWY, ANCHORAGE, AK
Scope of Work: PERFORM GW MONITORING/SAMPLING → COLLECT SAMPLES		
Equipment: YSI 556 (DEQ75AA); TURBIDITY METER (20140708); WATER LEVEL METER (067814); MP-50		Weather: WINDY ~ 60°F

Time	Activity/Comments	SWA
0645	LOAD VEHICLE	
0700	HOOD TO SITE; @ 7:20 → NOTED THAT WE FORGOT EQUIPMENT, HEAD BACK TO OFFICE	
0745	REGROUP BACK TO SITE	
0828	ARRIVE ONSITE; NOTIFY PM; CONDUCT TAILGATE SAFETY MEETING	
0837	CALIBRATE EQUIPMENT. (YSI, TURBIDITY, WATER LEVEL METER)	
0854	START LOW FLOW PURGE PARAMETER MONITORING @ MW-7	
0906	WATER LEVEL DROPS BELOW PUMP, NOT ENOUGH TUBING TO LOWER LOWERING ~13 FT, PUMP PULLED & MORE TUBING ADDED	
0917	RE-START PURGING @ MW-7 w/ PUMP ON LOWEST SETTING	
0947	COLLECT GW SAMPLE MW-7-W-180612; ALSO COLLECTED DUP-1-W-180612 @ 0910 AM → COLLECTED DUP-2-W-180612	
0955	BEGIN CLEANUP @ MW-7; DECON EQUIPMENT	
1002	SET UP @ MW-9 FOR LF PURGE GW SAMPLING.	
1004	START W/ LF PURGE SAMPLING	
1042	COLLECT MW-9-W-180612 GW SAMPLE	
1045	DECON EQUIPMENT; SETUP @ MW-14	
1057	START LF PURGE SAMPLING @ MW-14	
1129	COLLECT MW-14-W-180612 GW SAMPLE;	
1131	DECON EQUIPMENT; BREAK FOR LUNCH	
1148	SET UP @ MW-3; PREP FOR LF PURGE SAMPLING.	
1154	START LF PURGE SAMPLING @ MW-3	
1227	COLLECT MW-3-W-180612 / DUP-3-W-180612	
1235	SITE CLEANUP/DECON EQUIPMENT; PURGED DECON WATER ~1.70 GAL	
1242	DEMOB FROM SITE AND HEAD BACK TO OFFICE	
1338	ARRIVE @ OFFICE; OFFLOAD EQUIPMENT; SAMPLES IN FRIDGE	
	PURGED WATER/DECON WATER THROUGH GAC: 4.35 GAL	

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: X GAC Tracker: X Disposal Log: N/A Lab COC Review: X

Groundwater Monitoring Field Sheet

Project Name: 92609 (ADEC File ID: 2110.38.007)
Project Number: 620911
Field Staff: O. Yan / T. Weaver
Date: 06/11/18

Well ID	Time	DTW (ft - btoc)	DTB (ft-btoc)	DTP (ft-btoc)	Product Thickness (feet)	Amount of Product Removed (feet)	Casing Diameter (inches)	PID (ppm)	Comments
MW-1	1000	10.43	19.12	—	—	—	2"	—	Gauge only
MW-3	1045	8.92	16.63	—	—	—	2"	—	
MW-6	0953	7.37	11.58	—	—	—	2"	—	SB
MW-7	1028	8.74	18.43	—	—	—	2"	—	Soft bottom
MW-8	10:26	8.65	18.50	—	—	—	2"	—	Gauge only, Soft bottom
MW-9	1040	4.36	12.28	—	—	—	2"	—	
MW-10	1018	5.37	16.08	—	—	—	2"	—	Gauge only
MW-11	1012	6.55	13.24	—	—	—	2"	—	
MW-12	1009	5.19	14.40	—	—	—	2"	—	
MW-13	1043	4.49	12.77	—	—	—	2"	—	
MW-14	10:37	7.29	15.04	—	—	—	2"	—	
MW-15	1031	8.96	22.00	—	—	—	2"	—	
MW-16	1033	8.67	21.86	—	—	—	2"	—	
DWW-1	—	—	—	—	—	—	6"	—	Domestic well

GAC Filtered Water Volume: 107 gallons

Volume logged on *Portable GAC Volume Tracking Log?* ☒

DTP - depth to product; DTW - depth to water; DTB - depth to bottom; ft-btoc - feet below top of casing ; ppm - parts per million

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-3 Date 6/12/18 Page 1 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 3 Casing Diameter (in.) 2" Well Material PVC [X] SS [ ]

Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 8.92 Total Depth (ft-btoc) 16.63 Water Column / Gallons in Well 7.71 / 1.237

Sample ID MW-3-W-180612

Dup ID DUP-3-W-180612

Sample Time 1227 Start End

No-Purge Method

Sampler Length (in) 36 [ ] 30 [ ] Depth of Sample

Weights Low-Flow Sampling Position Suspended [ ] Bottom [ ] Bottom set [ ]

Was Teflon Baler used to collect non volatile samples Yes [ ] No [ ]

Low Flow Method

Pump type Bladder [X] Other [ ] Pump Intake (ft-btoc) 9.55

Flow rate (ml/minute) 40-50 Volumes Purged 0.45 Gal

Did well Dewater? Yes [ ] No [X] Purge Time: Start 1157 End 1227

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
1159	5	40	8.98	0.10	8.82	0.134	3.80	5.90	109.4	57.97	CLOUDY/CLEAN
1204	10	40	9.23	0.15	9.01	0.131	3.11	5.34	130.8	60.45	CLEAN
1209	15	50	9.33	0.20	9.04	0.132	2.84	5.56	116.2	33.39	" "
1214	20	50	9.36	0.25	9.07	0.133	2.67	5.56	112.8	30.57	" "
1219	25	50	9.39	0.30	9.21	0.135	2.68	5.69	103.5	33.33	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	[ ]			
Full Scan VOCs by 8260	[X]	40 mL vial	3/3	HCl
HVOCs by 8260	[ ]			
GRO by AK 101	[X]	40 mL vial	3/3	HCl
DRO by AK 102	[X]	250 mL amber	2	HCl
RRO by AK 103	[ ]			
Lead by 6010	[ ]			
PAHs by 8270	[ ]			
Alkalinity by 2320B	[ ]			
Methane by RSK175	[ ]			
Sulfate by EPA 300	[ ]			
Nitrate/Nitrite by EPA 300	[ ]			
Ferrous Iron	[ ]			
		TOTAL:	14	

Well Casing Volumes

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

Field Test Results:

N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-6 Date 6/11/18 Page 2 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

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

Static Water Level (ft-btoc) 7.37 Total Depth (ft-btoc) 11.58 Water Column / Gallons in Well 4.21 / 0.674

Sample ID MW-6-W-180611

Dup ID —

Sample Time 1338 Start End

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample [illegible]

Weights [illegible] Bottom ☐ Low-Flow Sampling Position Suspended ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐

Pump Intake (ft-btoc) 8.0 → 8.2

Volumes Purged 0.4 Gal

Flow rate (ml/minute) 50-70

Purge Time: Start 1305 End 1335

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
1310	5	50	7.30	0.05	13.70	[illegible]	[illegible]	6.14	42.1	>500	Cloudy
1315	10	70	7.00	0.05	[illegible]	[illegible]	[illegible]	5.72	[illegible]	>500	" "
1320	15	50	7.75	0.10	10.34	0.292	5.20	5.58	28.1	>500	" "
1325	20	50	8.03	0.15	11.14	0.304	4.45	5.56	33.4	>500	" "
1330	25	50	8.07	0.20	10.40	0.313	4.42	5.49	40.6	>500	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			TOTAL: 8	

Well Casing Volumes

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

Field Test Results:

N/A Ferrous Iron mg/L Nitrate N/A mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: Good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Well dewatered at lowest setting for MP-50.

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-7 Date 6/12/18 Page 3 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

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

Static Water Level (ft-btoc) 8.74 Total Depth (ft-btoc) 18.43 Water Column / Gallons in Well 9.69 / 1.550 Sample ID MW-7-W-180612

Dup ID —

Sample Time 0947 Start End

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample

Weights — Low-Flow Sampling Position Suspended ☐ Bottom ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) N/A

Flow rate (ml/minute) 55 Volumes Purged 0.55 Gal

Did well Dewater? Yes ☒ No ☐ Purge Time: 917 Start ~~0954~~ Tw End 0943

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 ~~0959~~ TW	5	55	10.19	0.15	7.59	0.148	7.11	5.19	262.4	173.6	RUSTY
0927 ~~0924~~ TW	10	55	10.39	0.2	7.96	0.145	6.06	4.97	276.7	157.5	" "
0932 ~~0929~~ TW	15	55	10.39	0.25	8.49	0.145	5.93	5.44	245.6	139.5	" "
0937 ~~0934~~ TW	20	55	10.40	0.3	8.80	0.145	5.95	5.54	238.5	87.18	" "
0942 ~~0939~~ TW	25	55	10.36	0.35	9.36	0.146	5.68	5.70	234.2	75.27	MOSTLY CLEAR

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			

Well Casing Volumes

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

Field Test Results: Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ON SITE (WEST SIDE)

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

-WATER LEVEL DROPPED BELOW PUMP WHILE PURGING, HAD TO RESET PUMP

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-9 Date 6/12/18 Page 4 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 3 Casing Diameter (in.) 2" Well Material X PVC ___ SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 4.45 Total Depth (ft-btoc) 12.28 Water Column / Gallons in Well 7.83 / 1.253 Sample ID MW-9-W-180612 Dup ID —

Sample Time 1042 Start ___ End ___

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample ___

Weights ___ Position ___ Suspended ☐ Bottom ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low-Flow Sampling

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 5.10

Flow rate (ml/minute) 85-95 Volumes Purged 0.65 gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1007 End 1039

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
1014	5	95	4.48	0.10	11.04	0.229	5.06	6.53	139.8	143.4	CLEAR/cloudy
1019	10	95	4.53	0.20	10.95	0.249	4.14	6.40	118.3	111.8	" "
1024	15	85	4.54	0.35	10.70	0.247	3.86	6.46	107.8	64.11	CLEAR
1029	20	85	4.54	0.40	10.67	0.249	3.81	6.48	98.1	42.69	" "
1034	25	85	4.54	0.50	10.27	0.251	3.71	6.46	93.3	33.71	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
		TOTAL	8	

Well Casing Volumes

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

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

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-11 Date 6/11/18 Page 5 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 4 Casing Diameter (in.) 2" Well Material X PVC ___ SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 6.55 Total Depth (ft-btoc) 13.24 Water Column / Gallons in Well 6.69 / 1.0704 Sample ID MW-11-W-180611 Dup ID —

Sample Time 1520 Start ___ End ___

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample ___

Weights — Low-Flow Sampling Position Supended ☐ Bottom set ☐ Bottom ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 7.15

Flow rate (ml/minute) 70-140 Volumes Purged 0.664

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1447 End 1527

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
1452	5	140	6.81	0.05	9.61	0.641	8.70	6.48	21.3	8.73	CLEAR
1457	10	70	6.90	0.20	9.34	0.652	8.67	6.41	7.9	12.97	" "
1502	15	85	7.00	0.30	9.10	0.655	8.92	6.42	-2.5	9.10	" "
1507	20	85	7.15	0.45	8.87	0.663	8.92	6.42	-11.0	6.96	" "
1512	25	85	7.25	0.55	8.60	0.666	9.12	6.40	-13.5	4.00	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3 ✓	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3 ✓	HCl
DRO by AK 102	■	250 mL amber	2 ✓	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			TOTAL: 8 ✓	

Well Casing Volumes

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

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

Well Information

Well Location: ONSITE - ALONG SEWARD HWY

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-12 Date 6/11/18 Page 6 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 5 Casing Diameter (in.) 2" Well Material X PVC ___ SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 5.19 Total Depth (ft-btoc) 14.40 Water Column / Gallons in Well 9.21 / 1.474 Sample ID MW-12-W-180611 Dup ID ___

Sample Time 1434 Start ___ End ___

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sampl...

Weights ... Position ... Supended ☐ Bottom ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low-Flow Sampling

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 5.85

Flow rate (ml/minute) 100 - 115 Volumes Purged 0.55 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1402 End 1432

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
1407	5	115	5.32	0.05	10.36	0.237	4.46	6.58	91.6	22.84	CLEAR
1412	10	100	5.32	0.20	10.66	0.235	3.86	6.46	81.9	16.10	" "
1417	15	100	5.33	0.25	10.58	0.236	4.23	6.51	70.4	13.66	" "
1422	20	100	5.34	0.35	10.27	0.237	4.78	6.54	66.2	10.63	" "
1427	25	100	5.34	0.45	10.62	0.236	5.01	6.50	68.5	9.18	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	~~3~~ 2	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			TOTAL 7	

Well Casing Volumes

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

Field Test Results:

Ferrous Iron ___ mg/L Nitrate ___ mg/L Other ___

Well Information

Well Location: ___

Condition of Well: ___

Well Completion: [Flush Mount] / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-13 Date 06/11/18 Page 7 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 3 Casing Diameter (in.) 2" Well Material X PVC SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 4.49 Total Depth (ft-btoc) 12.71 Water Column / Gallons in Well 8.22 / 1.315

Sample ID MW-13-W-180611 Dup ID DUP-1-W-180611

Sample Time 1615 Start End

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample

Weights Low-Flow Sampling Position Suspended ☐ Bottom set ☐ Bottom ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 8.00

Flow rate (ml/minute) 85 - 120 Volumes Purged 0.75 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1542 End 1612

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
1547	5	120	7.41	0.05	9.18	0.381	4.14	6.89	16.2	17.29	CLEAR
1552	10	105	7.61	0.10	8.29	0.377	3.48	6.80	6.30	3.64	" "
1557	15	85	7.75	0.25	9.54	0.381	3.32	6.73	6.10	3.14	" "
1602	20	85	7.83	0.35	7.11	0.385	3.34	6.69	7.00	1.74	" "
1607	25	85	8.01	0.50	7.87	0.386	3.30	6.72	6.55	1.57	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3 / 3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3 / 3	HCl
DRO by AK 102	■	250 mL amber	2 / 2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
		TOTAL:	8 / 8	

Well Casing Volumes

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

Field Test Results:

N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: Good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-14 Date 6/12/18 Page 8 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 5 Casing Diameter (in.) 2" Well Material X PVC ___ SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 4.59 Total Depth (ft-btoc) 15.04 Water Column / Gallons in Well 10.45 / 1.672

Sample ID MW-14-W-180612 Dup ID — Sample Time 1127 Start ___ End ___

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample ___

Weights ___ Position ___ Low-Flow Sampling

Suspended ☐ Bottom set ☐ Bottom ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 5.05

Flow rate (ml/minute) 105 Volumes Purged 0.70 Gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1053 End 1125

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
1100	5	105	4.60	0.05	12.20	0.270	5.37	6.61	89.0	42.60	Clear,
1105	10	105	4.63	0.15	11.42	0.275	3.37	6.58	86.3	7.19	" "
1110	15	105	4.63	0.25	11.33	0.279	3.25	6.50	88.4	5.28	" "
1115	20	105	4.63	0.35	10.96	0.282	2.98	6.38	94.2	3.22	" "
1120	25	105	4.63	0.45	11.00	0.285	3.06	6.51	87.8	2.94	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3 ~~8~~	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
		TOTAL	8	

Well Casing Volumes

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

Field Test Results:

NA Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: ONSITE

Condition of Well: Good

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-15 Date 6/11/18 Page 9 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 5 Casing Diameter (in.) 2" Well Material X PVC / SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 8.96 Total Depth (ft-btoc) 22.05 Water Column / Gallons in Well 13.09 / 2.09 Sample ID MW-15-W-180611 Dup ID —

Sample Time 1245 Start End

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sampler

Weights — Low-Flow Sampling Position Suspended ☐ Bottom set ☐ Bottom ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 9.6

Flow rate (ml/minute) 90-155 Volumes Purged 0.75 Gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1210 End 1236

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
1221	5	155	9.11	0.10	7.50	0.243	9.60	6.29	3.5	41.42	Cloudy
1226	10	90	9.04	0.25	7.12	0.237	2.23	6.11	11.7	20.09	" "
1231	15	90	9.10	0.35	7.60	0.236	5.05	6.17	0.90	16.92	" "
1236	20	90	9.13	0.45	6.81	0.242	3.72	6.15	-2.0	20.05	" "
1241	25	90	9.11	0.55	6.14	0.247	2.71	6.19	-4.1	16.31	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			TOTAL: 8	

Well Casing Volumes

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

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

Well Information

Well Location: ONSITE → GW0

Condition of Well: Good ✓

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID MW-16 Date 6/11/18 Page 10 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) 5 Casing Diameter (in.) 2" Well Material X PVC ___ SS Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 8.67 Total Depth (ft-btoc) 21.86 Water Column / Gallons in Well 13.19 / 2.11 Sample ID MW-16-W-180611 Dup ID —

Sample Time 1137 Start ___ End ___

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sample ___

Weights ___ Low-Flow Sampling Position Supended ☐ Bottom ☐ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 9.25

Flow rate (ml/minute) 110 – 150 Volumes Purged 1.5 Gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1100 End 1135

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
1105	5	150	8.73	0.10	8.08	0.295	9.16	3.54	246.7	—	CLEAR
1110	10	110	8.71	0.25	6.39	0.286	3.47	2.84	261.1	12.70	" "
1115	15	110	8.70	0.40	6.01	0.276	5.71	3.31	224.0	101.00	" "
1120	20	110	8.69	0.50	5.94	0.278	5.49	3.83	155.1	11.52	" "
1125	25	110	8.70	0.90	5.70	0.277	5.00	4.45	140.5	7.67	" "
1130	30	110	8.70	1.00	5.67	0.274	4.85	4.62	131.0	6.04	" "
1135	35	110	8.61	1.20	5.62	0.274	4.60	4.75	120.3	5.24	" "

Constituents Sampled		Container	Number	Preservative
BTEX by 8260	☐			
Full Scan VOCs by 8260	■	40 mL vial	3	HCl
HVOCs by 8260	☐			
GRO by AK 101	■	40 mL vial	3	HCl
DRO by AK 102	■	250 mL amber	2	HCl
RRO by AK 103	☐			
Lead by 6010	☐			
PAHs by 8270	☐			
Alkalinity by 2320B	☐			
Methane by RSK175	☐			
Sulfate by EPA 300	☐			
Nitrate/Nitrite by EPA 300	☐			
Ferrous Iron	☐			
			TOTAL: 8	

Well Casing Volumes

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

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

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

REPLACED LOCK

Groundwater Sampling Form

Project No. 620911 PM Siobhan Pritchard Well ID DWW-1 Date 6/12/18 Page 11 of 11

Site ID / Location 92609 / Mile 79 Seward Highway, Portage, Alaska (ADEC 2110.38.007)

Screen Setting (ft-btoc) UNK | Casing Diameter (in.) 6" | Well Material X PVC ___ SS | Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) / | Total Depth (ft-btoc) / | Water Column / Gallons in Well /

Sample ID DWW-1-W-180612

Dup ID DUP-2-W-180612

Sample Time 910 Start 1500 End 910

No-Purge Method

Sampler Length (in) 36 ☒ 30 ☐ Depth of Sampler (ft-btoc) UNK

Weights Top ☐ Bottom ☒ Position Suspended ☒ Bottom set ☐

Was Teflon Baler used to collect non volatile samples Yes ☐ No ☒

Low Flow Method 6/11/18 6/12/18

Pump type Bladder ☐ Other ☐ Pump Intake (ft-btoc)

Volumes Purged 0.3 GAL

Flow rate (ml/minute) Purge Time: Start

Did well Dewater? Yes ☐ No ☐ End

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)	Turbidity	Additional notes

No-Purge Sampling Method (Hydrasleeves)

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	☐	524.2 ■	40 mL vial	4 / 4	HCl +
Full Scan VOCs by 8260	☐				
HVOCs by 8260	☐				
~~GRO by AK 101~~	~~■~~		~~40 mL vial~~ MISSED SAMPLE	~~3~~ / 3	HCl
DRO by AK 102	■		250 mL amber	1 / 1	HCl
RRO by AK 103	■		250 mL amber	1 / 1	HCl
Lead by 6010	☐				
PAHs by 8270	☐				
Alkalinity by 2320B	☐				
Methane by RSK175	☐				
Sulfate by EPA 300	☐				
Nitrate/Nitrite by EPA 300	☐				
Ferrous Iron	☐				

TOTAL = 12

Well Casing Volumes

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

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

Well Information

Well Location: ONSITE

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

USED 2L HYDRASLEEVE BAG ; 0.3 GAL PURGED EXTRA

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

Control number: 06784
Date (mm/dd/yyyy): 06/14/2018
User (print name): YAN, OLIVER

Project number: 620911
Project name: CEMC 92609

Location: MILE 79 SEWARD HWY PORTAGE, AK

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• Check for broken or missing parts.	
• Check battery	☑
• Check operation of buzzer.	☑
• Check operation of signal light.	☑
• Test probe in water to ensure unit operates, both visually and audibly.	☑
• Check cable.	☑

Filing: Field file

Signature:

TTT Environmental

The preferred source for instrument Rentals, Sales, Service, and Supplies!

CALIBRATION/INSPECTION REPORT

Calibration Date: 6/8/2018
Report Date (check-out): 6/8/2018

Company Name: GHD
Rental Description: YSI 556

S/O #: S181237
Serial #: 556-05.D2373AR

CALIBRATION*

Sensor	Zero Value	Calibration*			
		Desired reading	Instrument reading	mV	Slope/Gain
Spec. Conductivity/Cond.	na	1.413 @25 C	1.413 @ 20.70 C	1.413/1322	0.992
pH	na	7.000 @25 C	7.02 @ 20.99 C	-7.5	
pH	na	4.01 @25 C	4.00 @ 20.79 C	163.8	171
pH	na	10.000 @25 C	10.07 @ 20.95 C	-187.7	180
ORP	na	220mV @25 C	240 @ 20.95 C	-11	
D.O.	na	100% @25 C	99.5 % 20.10 C	BP=29.78	0.849
			9.03 Mg/L		

* Calibrated per manufacturer specifications

CALIBRATION SOLUTION INFORMATION

Components	Conc.	Lot #	Manuf.	Accuracy	Fill Date	Exp. Date
Specific Conductivity	100%	RW1	OAKTON	-	na	11/1/2018
pH	7.00	13C2S	YSI	+/- 0.01	na	9/1/2018
pH	4.01@25C	13B3R	YSI	+/- 0.01	na	4/1/2019
pH	10.00@25C	13B3T	YSI	+/- 0.01	na	12/1/2018
ORP	220mV	4118	Hanna	-	na	3/1/2019

Calibrated by: Steve Ziegler

Signature:

INSTRUMENT INSPECTION

Item	Pre-rental Check-out	Post-rental Check-in ("Damaged" or "No" may indicate customer charge)
Inspect all instrument components for cracks, damage, etc:		No Damage Damaged
Meter (battery cover screws) & cable?:		No Damage Damaged
Cable is plugged into handheld?:	Yes	Yes No
Instrument powers on/off properly?:	Yes	Yes No
Battery power bar (lower right hand corner) shows at least 30%?:	Yes	
Display/LCD contrast is correct and no black streaks in LCD screen exist?:	Yes	Yes No
All display readings are positive (excluding pHmV & ORP)?:	Yes	Yes No
Probe inspection?:		No Damage Damaged
Probe transport cup is attached & contains 1/4" tap water or pH 4 buffer?:	Yes	Yes No
Calibrated within the last 10 days?:	Yes	
Rental checklist completed?:	Yes	Yes

Comments:

Signature (Check-out):

Signature (Check-in):

Phone: (907) 770-9041 **Fax: (907) 770-9046** **Email: info@tttenviro.com** **www.tttenviro.com**

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INSTRUMENT RENTAL FUNCTION/CHECKLIST

Company Name: GHD

Rental Description: YSI 556

S/O #: 5181237

Serial #: ~~E~~ 23738M

Item Description	Checked Out?	Checked In?	Damaged / Missing?
556 Multi parameter meter with barometer	✓		
Wrist strap	✓		
4 meter probe assembly w/ pH/ORP, cond./temp, & DO	✓		
Pelican carrying case	✓		
556 Quick-start Guide & CD in ziploc bag	✓		
YSI 5511 Maintenance kit (including the following):	✓		
Probe installation/removal tool	✓		
DO sensor set screw	✓		
Allen wrench for DO sensor set screw	✓		
DO sensor port plug	✓		
Conductivity probe cleaning brush			
O-Rings for DO sensor	✓		
2 - Replacement Flow cell O-ring	✓		
DO membrane kit (w/**2 replacement caps & instructions**)	✓		
DO membrane solution (at least 1/4 full)	✓		
Probe Sensor Guard	✓		
Transport/Calibration cup	✓		
Stainless Steel sampling cup	✓		
Optional:			
Flow cell (including the following):			
2 each hose barbs: 3/16", 1/4", 3/8", 1/2"			
Optional - 2 each YSI body couplings			
Both upper and lower o-rings in place on flow cell			

Instrument Function Test / Inspection (Correct all deficiencies)	
Pelican case general condition, rubber seal, TTT label, & foam in place and in good condition:	Yes
TTT property tag in place on top of instrument:	Yes
Instrument display face plate in good condition (only minor scratches and smears); And backlight functions properly:	Yes
Date and Time set correctly (Esc/system setup/date & time):	Yes
Shutoff time set to 60 min. (Esc/system setup/shut off time):	Yes
All data deleted (Esc/file/delete all files/delete):	Yes
Battery power bar (lower right hand corner) shows at least 30%:	Yes

Signature (Check-out): [signature] Signature (Check-in): [signature]

Declared Value: $3,700

- By renting with TTT customer agrees to the rental terms and conditions (copy available upon request).
- Customer is responsible for all parts and equipment damaged or missing during rental.
- All instruments have been inspected and calibrated (when applicable) prior to rental.
- TTT suggests calibrating/bump testing instruments prior to each days use.

Phone: (907) 770-9041 **Fax: (907) 770-9046** **Email: info@tttenviro.com** **www.tttenviro.com**

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CALIBRATION/INSPECTION REPORT

Calibration Date: 6/8/2018
Report Date (check-out): 6/8/2018

Company Name: GHD
Rental Description: HF Scientific Micro TPW Turbidimeter

S/O #: S181237
Serial #: HFTBWturb-14.201407081

CALIBRATION*

Sensor	Zero Value	Calibration*		Alarm Level	
		Desired reading	Instrument reading	Low	High
NTU	na	1000 NTU	1000 NTU	na	na
NTU	na	10 NTU	11 NTU	na	na
NTU	na	0.02 NTU	0.00 NTU	na	na

* Calibrated per manufacturer specifications

CALIBRATION SOLUTION INFORMATION

Components	Conc.	Lot #	Manuf.	Accuracy	Fill Date	Exp. Date
Formazin Solution	1000	40603	*ProCal*	na	na	6/1/2019
Formazin Solution	10.0	50539	*ProCal*	na	na	6/1/2019
Formazin Solution	0.02	40601	*ProCal*	na	na	6/1/2019

Calibrated by: Steve Ziegler
Signature:

Item Description	Qty	Checked Out?	Checked In?	Damaged / Missing?
HF Scientific Micro TPW Turbidmeter	1	✓		
Manual	1	✓		
Sample vials	3	✓		
In reclosable bag:				
Silicone Oil, Kim Wipes, 4 Spare AAA Batteries	1	✓		

Instrument Function Test / Inspection (Correct all deficiencies)	Pre-rental Check-out	Post-rental Check-in *(Tag any "damaged" or "No's" for Service to correct)*
Inspect instrument for cracks & damage, LCD for proper display, and light chamber for water/dust/debris:		No Damage Damaged
Ensure spare batteries in kit are unused and contacts sealed with white tape:	Yes	Yes No
Dispose of any secondary calibration standard vial or sample vial that has excessive scratches, cracks, or staining:		Yes No
HF Scientific recommends TPW Turbidimeters are recalibrated at least once every three months. Calibrated since the last rental?:	Yes	
Rental checklist completed?:	Yes	Yes

Comments:

Signature (Check-out):
Signature (Check-in):

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

Control number: 06784
Date (mm/dd/yyyy): 06/12/18
User (print name): TRAVIS WEAVER

Project number: ~~[redacted]~~ 620911
Project name: CEHC 72609

Location: MILE 79 SEWARD HWY PORTAGE, AK

Additional equipment control numbers and descriptions:

Field procedure before use:

	Check when completed
• Check for broken or missing parts.	✓
• Check battery	✓
• Check operation of buzzer.	✓
• Check operation of signal light.	✓
• Test probe in water to ensure unit operates, both visually and audibly.	✓
• Check cable.	✓

Filing: Field file

Signature: [signature]

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

RENTAL.

Control number: 05D2373 (YSI-556)
Date (mm/dd/yyyy): 6/12/18
User (print name): YAN, OLIVE

Project number: 620911
Project name: CEMC 98609

Location: MILE 79 SEWARD HWY PORTAGE, AK

Calibration solution(s):	pH 7.0	pH 4.0	CONDUCTIVITY	ORP
Lot #(s):	VT1	VW3H	VT2	2079 (H17021)
Supplier(s):	OAKTON	OAKTON	OAKTON	HANNA
Expiration date(s):	07/2019	05/2019	07/2019	10/2021

Additional information:

Field procedure before use:

	Check when completed
• Check kit contents.	☑
• Check pH 7 buffer reading. Calibrate if greater than ±0.2.	Reading 6.87
PH is a two point calibration but always start with the seven standard.	
• Fill calibration cup with pH 7.0 buffer and attach to probe with probes facing down.	Calibrated Y / N
• Press Esc to enter into main menu and use down arrow key to highlight calibration menu. Press ↵ key to accept.	
• Use ↓ key to highlight pH symbol and press enter ↵.	
• Select 2 point calibration and use number pad to enter 7.0 and push ↵ to accept value. Push ↵ again to calibrate.	
• Repeat these steps to calibrate your pH value to 4.0 or 10.0.	Reading 4.02
• Press Esc to return to the calibration screen.	
Check conductivity standard near the expected range. Calibrate if greater than ±0.5%.	Standard 1.413 Reading 1.412
Conductivity is a one point calibration.	Calibrated Y / N
• Fill calibration cup with 1.413 mS standard and attach to probe with probes facing up.	
• Press Esc to return to the calibration screen.	
• Use the ↑or ↓ to select SpC and press ↵	
• Use the number key pad to enter 1.413 and push ↵ to accept value. Push ↵ again to calibrate.	
Check ORP standard:	
• Press Esc to return to the calibration screen. 240 mV.	Standard 240 mV Reading 237.7 mV
• Use the ↑or ↓ to select ORPand press ↵	
• Use the number key pad to enter the value and push ↵ to accept. Push ↵ again to calibrate.	
To calibrate DO, see manual for instructions.	Calibrated Y / N

Filing: Field file

Signature:

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

Control number: 20140708l
Date (mm/dd/yyyy): 06/12/18
User (print name): TRAVIS WEAVER

Project number: 620911
Project name: CEMC 92609

Location: MILE 79 SEWARD HWY
~~SEWA~~ PORTAGE, AK

Additional equipment control numbers and descriptions:

1000 NTU	10.0 NTU	0.02 NTU
LOT: 80303	LOT: 72262	LOT: 80301
EXP: MAR-2020	EXP: 3/2020	EXP: MAR-2020
ProCal	HF SCIENTIFIC	PROCAL

Field procedure before use:

	Check when completed
• Turn the DRT-15CE to the 0-10 range.	
• Check outside of reference standard bottles for cleanliness, no condensation, surface scratches, or finger smudges.	☑
• Insert the reference standard and index.	☑
• Adjust the Reference Adjust in the appropriate direction to cause the display to read 0.02 NTU.	☑
• The unity is now ready to use on any range.	
Note: Condensation, surface scratches, finger smudges, and dirt on outside of sample bottles affects meter readings.	

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-6 PLANER AREA
92609	620911	6/12/18	4.35 GAL	" "

Monitoring Well Condition Form

Site ID: 92609 Site Address: MILE 79 (EWAKU HWY, POLKA) Project No: 620911 Date: 6/11/18

Well ID	Condition	Notes
MW-16	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	STICK-UP, GOOD CONDITION
MW-15	Well Lid: ☐Good ☑ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☑ Stripped Well Vault: ☐ Good ☐ Damaged	STICK UP, GOOD CONDITION
MW-6	Well Lid: ☐Good ☑ Broken ☐ Missing Missing Bolts: ☐ Yes ☑ No ☐ Stripped Well Vault: ☑ Good ☐ Damaged	
MW-10	Well Lid: ☐Good ☑ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☑ Stripped Well Vault: ☐ Good ☑ Damaged	FLANGE BOLT HOLES STRIPPED
MW-1	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☑ Yes ☐ No ☑ Stripped Well Vault: ☑ Good ☐ Damaged	NOT BOLTABLE
MW-12	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☑ Yes ☐ No ☐ Stripped Well Vault: ☑ Good ☐ Damaged	ONE BOLT BROKEN OFF IN FLANGE
MW-11	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☑ Stripped Well Vault: ☑ Good ☐ Damaged	
MW-4	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	
MW-13	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☑ No ☐ Stripped Well Vault: ☑ Good ☐ Damaged	
MW-14	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☑ No ☐ Stripped Well Vault: ☑ Good ☐ Damaged	
MW-3	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	STICK UP, GOOD
MW-9	Well Lid: ☑Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☑ No ☐ Stripped Well Vault: ☐ Good ☑ Damaged	
MW-7	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	STICK UP, GOOD
MW-8	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	STICK UP, GOOD
	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	
	Well Lid: ☐Good ☐ Broken ☐ Missing Missing Bolts: ☐ Yes ☐ No ☐ Stripped Well Vault: ☐ Good ☐ Damaged	

1447 1520

1542 13 1615

1642

Appendix D
Laboratory Analytical Report

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

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: June 28, 2018 09:26

Project: 92609

Account #: 10880
Group Number: 1955344
PO Number: 0015276763
Release Number: CARRIER
State of Sample Origin: AK

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	GHD	Attn: Oliver Yan
Electronic Copy To	GHD	Attn: GHD EDF
Electronic Copy To	GHD	Attn: Siobhan Pritchard
Electronic Copy To	GHD	Attn: Sarah Gillette
Electronic Copy To	GHD	Attn: Jeffrey Cloud
Electronic Copy To	Chevron	Attn: GHD EDD

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-6-W-180611 Grab Groundwater	06/11/2018 13:38	9660575
MW-11-W-180611 Grab Groundwater	06/11/2018 15:20	9660576
MW-12-W-180611 Grab Groundwater	06/11/2018 14:34	9660577
MW-13-W-180611 Grab Groundwater	06/11/2018 16:15	9660578
MW-15-W-180611 Grab Groundwater	06/11/2018 12:48	9660579
MW-16-W-180611 Grab Groundwater	06/11/2018 11:37	9660580
MW-7-W-180612 Grab Groundwater	06/12/2018 09:47	9660581
MW-9-W-180612 Grab Groundwater	06/12/2018 10:42	9660582
MW-14-W-180612 Grab Groundwater	06/12/2018 11:27	9660583
MW-3-W-180612 Grab Groundwater	06/12/2018 12:27	9660584
DWW-1-W-180612 Grab Groundwater	06/12/2018 09:10	9660585
DUP-1-WD-180611 Grab Groundwater	06/11/2018	9660586
DUP-2-WD-180612 Grab Groundwater	06/12/2018	9660587
DUP-3-WD-180612 Grab Groundwater	06/12/2018	9660588
QA-1-T-180612 Water	06/12/2018	9660589

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

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Project Name: 92609
ELLE Group #: 1955344

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:

AK 102-SV 4/8/02, GC Petroleum Hydrocarbons

Sample #s: 9660575, 9660577, 9660578, 9660579, 9660580, 9660581, 9660582, 9660583, 9660584, 9660586

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample #s: 9660576

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Batch #: 181660050A (Sample number(s): 9660575-9660584, 9660586)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD were below the acceptance window:
DRO C10-C25

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9660576

Sample Description: **MW-6-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660575
ELLE Group #: 1955344
Matrix: Groundwater

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 13:38

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-6-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 13:38

ChevronTexaco
ELLE Sample #: WW 9660575
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-6-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 13:38

ChevronTexaco
ELLE Sample #: WW 9660575
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-6-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 13:38

ChevronTexaco
ELLE Sample #: WW 9660575
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.20 J	0.051	0.25	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 14:38	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 14:38	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 19:55	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 19:55	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 03:08	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-11-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 15:20

ChevronTexaco
ELLE Sample #: WW 9660576
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.030	0.10	5
10335	Benzene	71-43-2	0.004 J	0.003	0.005	5
10335	Bromodichloromethane	75-27-4	N.D.	0.003	0.005	5
10335	Bromoform	75-25-2	N.D.	0.003	0.020	5
10335	Bromomethane	74-83-9	N.D.	0.003	0.005	5
10335	2-Butanone	78-93-3	N.D.	0.015	0.050	5
10335	Carbon Disulfide	75-15-0	N.D.	0.005	0.025	5
10335	Carbon Tetrachloride	56-23-5	N.D.	0.003	0.005	5
10335	Chlorobenzene	108-90-7	N.D.	0.003	0.005	5
10335	Chloroethane	75-00-3	N.D.	0.003	0.005	5
10335	Chloroform	67-66-3	N.D.	0.003	0.005	5
10335	Chloromethane	74-87-3	N.D.	0.003	0.005	5
10335	Cyclohexane	110-82-7	0.31	0.010	0.025	5
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.010	0.025	5
10335	Dibromochloromethane	124-48-1	N.D.	0.003	0.005	5
10335	1,2-Dibromoethane	106-93-4	N.D.	0.003	0.005	5

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

Sample Description: **MW-11-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 15:20

ChevronTexaco
ELLE Sample #: WW 9660576
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.005	0.025	5
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.005	0.025	5
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.005	0.025	5
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.003	0.005	5
10335	1,1-Dichloroethane	75-34-3	N.D.	0.003	0.005	5
10335	1,2-Dichloroethane	107-06-2	N.D.	0.003	0.005	5
10335	1,1-Dichloroethene	75-35-4	N.D.	0.003	0.005	5
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.003	0.005	5
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.003	0.005	5
10335	1,2-Dichloropropane	78-87-5	N.D.	0.003	0.005	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.003	0.005	5
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.003	0.005	5
10335	Ethylbenzene	100-41-4	1.0	0.003	0.005	5
10335	Freon 113	76-13-1	N.D.	0.010	0.050	5
10335	2-Hexanone	591-78-6	N.D.	0.015	0.050	5

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

Sample Description: **MW-11-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 15:20

ChevronTexaco
ELLE Sample #: WW 9660576
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	0.056	0.005	0.025	5
10335	Methyl Acetate	79-20-9	N.D.	0.005	0.025	5
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.003	0.005	5
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.015	0.050	5
10335	Methylcyclohexane	108-87-2	0.16	0.005	0.025	5
10335	Methylene Chloride	75-09-2	N.D.	0.003	0.005	5
10335	Styrene	100-42-5	N.D.	0.005	0.025	5
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.003	0.005	5
10335	Tetrachloroethene	127-18-4	N.D.	0.003	0.005	5
10335	Toluene	108-88-3	0.077	0.003	0.005	5
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.005	0.025	5
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.003	0.005	5
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.003	0.005	5
10335	Trichloroethene	79-01-6	N.D.	0.003	0.005	5
10335	Trichlorofluoromethane	75-69-4	N.D.	0.003	0.005	5

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

Sample Description: **MW-11-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 15:20

ChevronTexaco
ELLE Sample #: WW 9660576
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.003	0.005	5
10335	Xylene (Total)	1330-20-7	4.3	0.025	0.050	50
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	20	0.20	2.0	20
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	6.8	0.051	0.25	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.
The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 15:01	Patrick T Herres	5
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 15:24	Patrick T Herres	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 15:01	Patrick T Herres	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	4181741AA	06/23/2018 15:24	Patrick T Herres	50
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/19/2018 01:28	Marie D Beamenderfer	20
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/19/2018 01:28	Marie D Beamenderfer	20
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 03:36	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-12-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 14:34

ChevronTexaco
ELLE Sample #: WW 9660577
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-12-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660577
ELLE Group #: 1955344
Matrix: Groundwater

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 14:34

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-12-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 14:34

ChevronTexaco
ELLE Sample #: WW 9660577
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-12-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 14:34

ChevronTexaco
ELLE Sample #: WW 9660577
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	N.D.	0.051	0.25	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 15:47	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 15:47	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 20:23	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 20:23	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 04:33	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-13-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 16:15

ChevronTexaco
ELLE Sample #: WW 9660578
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	0.043	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-13-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660578
ELLE Group #: 1955344
Matrix: Groundwater

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 16:15

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	0.026	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-13-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 16:15

ChevronTexaco
ELLE Sample #: WW 9660578
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	0.002 J	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	0.057	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	0.061	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-13-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 16:15

ChevronTexaco
ELLE Sample #: WW 9660578
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	0.12	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	1.8	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.95	0.050	0.25	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 16:09	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 16:09	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/19/2018 00:32	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/19/2018 00:32	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 05:01	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-15-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 12:48

ChevronTexaco
ELLE Sample #: WW 9660579
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-15-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 12:48

ChevronTexaco
ELLE Sample #: WW 9660579
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-15-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 12:48

ChevronTexaco
ELLE Sample #: WW 9660579
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-15-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 12:48

ChevronTexaco
ELLE Sample #: WW 9660579
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	N.D.	0.051	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

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Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 16:55	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 16:55	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 20:51	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 20:51	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 05:28	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-16-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 11:37

ChevronTexaco
ELLE Sample #: WW 9660580
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-16-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 11:37

ChevronTexaco
ELLE Sample #: WW 9660580
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-16-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 11:37

ChevronTexaco
ELLE Sample #: WW 9660580
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-16-W-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018 11:37

ChevronTexaco
ELLE Sample #: WW 9660580
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	N.D.	0.052	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 17:18	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 17:18	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 21:18	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 21:18	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 05:57	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-7-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 09:47

ChevronTexaco
ELLE Sample #: WW 9660581
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-7-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 09:47

ChevronTexaco
ELLE Sample #: WW 9660581
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-7-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660581
ELLE Group #: 1955344
Matrix: Groundwater

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 09:47

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-7-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 09:47

ChevronTexaco
ELLE Sample #: WW 9660581
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.056 J	0.052	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 17:40	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 17:40	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 21:46	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 21:46	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 06:25	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-9-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 10:42

ChevronTexaco
ELLE Sample #: WW 9660582
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-9-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 10:42

ChevronTexaco
ELLE Sample #: WW 9660582
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	0.002	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-9-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 10:42

ChevronTexaco
ELLE Sample #: WW 9660582
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	0.002 J	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-9-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 10:42

ChevronTexaco
ELLE Sample #: WW 9660582
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	0.002	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.066 J	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.16 J	0.051	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 18:03	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 18:03	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 22:14	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 22:14	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 06:52	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-14-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 11:27

ChevronTexaco
ELLE Sample #: WW 9660583
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-14-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 11:27

ChevronTexaco
ELLE Sample #: WW 9660583
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-14-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 11:27

ChevronTexaco
ELLE Sample #: WW 9660583
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-14-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 11:27

ChevronTexaco
ELLE Sample #: WW 9660583
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	0.013 J	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	2.5	0.052	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 18:26	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 18:26	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 22:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 22:41	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 07:21	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-3-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 12:27

ChevronTexaco
ELLE Sample #: WW 9660584
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-3-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 12:27

ChevronTexaco
ELLE Sample #: WW 9660584
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **MW-3-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 12:27

ChevronTexaco
ELLE Sample #: WW 9660584
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **MW-3-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 12:27

ChevronTexaco
ELLE Sample #: WW 9660584
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.22 J	0.051	0.26	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 18:48	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 18:48	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 23:09	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 23:09	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 07:49	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **DWW-1-W-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660585
ELLE Group #: 1955344
Matrix: Groundwater

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018 09:10

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 524.2**		mg/l	mg/l	mg/l	
03648	Benzene		71-43-2	N.D.	0.0001	0.0005	1
03648	Ethylbenzene		100-41-4	N.D.	0.0001	0.0005	1
03648	Toluene		108-88-3	N.D.	0.0001	0.0005	1
03648	Xylene (Total)		1330-20-7	N.D.	0.0001	0.0005	1
GC Petroleum Hydrocarbons		**AK 102-SV 4/8/02**		mg/l	mg/l	mg/l	
13222	C10-<C25 DRO		n.a.	N.D.	0.055	0.28	1
13222	C25-C36 RRO		n.a.	N.D.	0.083	0.28	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by 524.2 - Water	EPA 524.2	1	K181721AA	06/21/2018 23:45	Jason M Long	1
13222	AK 102/103-SV	AK 102-SV 4/8/02	1	181730033A	06/26/2018 16:02	Heather E Williams	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	181730033A	06/25/2018 08:00	David S Schrum	1

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

Sample Description: **DUP-1-WD-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018

ChevronTexaco
ELLE Sample #: WW 9660586
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	0.041	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **DUP-1-WD-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018

ChevronTexaco
ELLE Sample #: WW 9660586
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	0.028	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **DUP-1-WD-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018

ChevronTexaco
ELLE Sample #: WW 9660586
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	0.002 J	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	0.057	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	0.074	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **DUP-1-WD-180611 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/11/2018

ChevronTexaco
ELLE Sample #: WW 9660586
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	0.13	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	1.8	0.010	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	1.0	0.051	0.25	1

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

The recovery for the LCSD is outside the method acceptance limits as noted on the QC Summary. Since the recovery is within our statistically derived limits the data is reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 19:11	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 19:11	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/19/2018 01:00	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/19/2018 01:00	Marie D Beamenderfer	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	181660050A	06/19/2018 08:17	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	181660050A	06/18/2018 08:00	Logan M Brosemer	1

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

Sample Description: **DUP-2-WD-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

ChevronTexaco
ELLE Sample #: WW 9660587
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles		**EPA 524.2**		mg/l	mg/l	mg/l	
03648	Benzene		71-43-2	N.D.	0.0001	0.0005	1
03648	Ethylbenzene		100-41-4	N.D.	0.0001	0.0005	1
03648	Toluene		108-88-3	N.D.	0.0001	0.0005	1
03648	Xylene (Total)		1330-20-7	N.D.	0.0001	0.0005	1
GC Petroleum Hydrocarbons		**AK 102-SV 4/8/02**		mg/l	mg/l	mg/l	
13222	C10-<C25 DRO		n.a.	N.D.	0.052	0.26	1
13222	C25-C36 RRO		n.a.	N.D.	0.077	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by 524.2 - Water	EPA 524.2	1	K181721AA	06/22/2018 00:10	Jason M Long	1
13222	AK 102/103-SV	AK 102-SV 4/8/02	1	181730033A	06/26/2018 16:29	Heather E Williams	1
13225	Mini-Ext. AK 102/103SV,DRO/RRO	AK 102-SV 4/8/02	1	181730033A	06/25/2018 08:00	David S Schrum	1

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

Sample Description: **DUP-3-WD-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

ChevronTexaco
ELLE Sample #: WW 9660588
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Acetone	67-64-1	N.D.	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1

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

Sample Description: **DUP-3-WD-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

ChevronTexaco
ELLE Sample #: WW 9660588
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1

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

Sample Description: **DUP-3-WD-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

ChevronTexaco
ELLE Sample #: WW 9660588
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1

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

Sample Description: **DUP-3-WD-180612 Grab Groundwater**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

ChevronTexaco
ELLE Sample #: WW 9660588
ELLE Group #: 1955344
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 19:57	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 19:57	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 23:37	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 23:37	Marie D Beamenderfer	1

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

Sample Description: **QA-1-T-180612 Water**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660589
ELLE Group #: 1955344
Matrix: Water

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**EPA 524.2**		**mg/l**	**mg/l**	**mg/l**	
03648	Benzene	71-43-2	N.D.	0.0001	0.0005	1
03648	Ethylbenzene	100-41-4	N.D.	0.0001	0.0005	1
03648	Toluene	108-88-3	N.D.	0.0001	0.0005	1
03648	Xylene (Total)	1330-20-7	N.D.	0.0001	0.0005	1
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	Acetone	67-64-1	0.071	0.006	0.020	1
10335	Benzene	71-43-2	N.D.	0.0005	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0005	0.001	1
10335	Bromoform	75-25-2	N.D.	0.0005	0.004	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.003	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.001	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0005	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0005	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0005	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0005	0.001	1

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

Sample Description: **QA-1-T-180612 Water**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660589
ELLE Group #: 1955344
Matrix: Water

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	Chloromethane	74-87-3	N.D.	0.0005	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0005	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0005	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0005	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.001	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0005	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0005	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0005	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0005	0.001	1

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

Sample Description: **QA-1-T-180612 Water**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660589
ELLE Group #: 1955344
Matrix: Water

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		mg/l	mg/l	mg/l	
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0005	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0005	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0005	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.001	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.001	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.001	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0005	0.001	1
10335	Styrene	100-42-5	N.D.	0.001	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0005	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0005	0.001	1
10335	Toluene	108-88-3	N.D.	0.0005	0.001	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	0.005	1

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

Sample Description: **QA-1-T-180612 Water**
Facility# 92609
Mile 79 Seward Hwy - Portage, AK

ChevronTexaco
ELLE Sample #: WW 9660589
ELLE Group #: 1955344
Matrix: Water

Project Name: **92609**

Submittal Date/Time: 06/14/2018 10:10
Collection Date/Time: 06/12/2018

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	**mg/l**	
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0005	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0005	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0005	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0005	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0005	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.001	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
03648	VOCs by 524.2 - Water	EPA 524.2	1	K181721AA	06/21/2018 23:20	Jason M Long	1
10335	TCL 4.3 VOCs	SW-846 8260B	1	4181741AA	06/23/2018 12:00	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4181741AA	06/23/2018 12:00	Patrick T Herres	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18168B20A	06/18/2018 19:28	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	18168B20A	06/18/2018 19:28	Marie D Beamenderfer	1

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

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Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

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: 4181741AA	Sample number(s): 9660575-9660584,9660586,9660588-9660589		
Acetone	N.D.	0.006	0.020
Benzene	N.D.	0.0005	0.001
Bromodichloromethane	N.D.	0.0005	0.001
Bromoform	N.D.	0.0005	0.004
Bromomethane	N.D.	0.0005	0.001
2-Butanone	N.D.	0.003	0.010
Carbon Disulfide	N.D.	0.001	0.005
Carbon Tetrachloride	N.D.	0.0005	0.001
Chlorobenzene	N.D.	0.0005	0.001
Chloroethane	N.D.	0.0005	0.001
Chloroform	N.D.	0.0005	0.001
Chloromethane	N.D.	0.0005	0.001
Cyclohexane	N.D.	0.002	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.002	0.005
Dibromochloromethane	N.D.	0.0005	0.001
1,2-Dibromoethane	N.D.	0.0005	0.001
1,2-Dichlorobenzene	N.D.	0.001	0.005
1,3-Dichlorobenzene	N.D.	0.001	0.005
1,4-Dichlorobenzene	N.D.	0.001	0.005
Dichlorodifluoromethane	N.D.	0.0005	0.001
1,1-Dichloroethane	N.D.	0.0005	0.001
1,2-Dichloroethane	N.D.	0.0005	0.001
1,1-Dichloroethene	N.D.	0.0005	0.001
cis-1,2-Dichloroethene	N.D.	0.0005	0.001
trans-1,2-Dichloroethene	N.D.	0.0005	0.001
1,2-Dichloropropane	N.D.	0.0005	0.001
cis-1,3-Dichloropropene	N.D.	0.0005	0.001
trans-1,3-Dichloropropene	N.D.	0.0005	0.001
Ethylbenzene	N.D.	0.0005	0.001
Freon 113	N.D.	0.002	0.010
2-Hexanone	N.D.	0.003	0.010
Isopropylbenzene	N.D.	0.001	0.005
Methyl Acetate	N.D.	0.001	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0005	0.001
4-Methyl-2-pentanone	N.D.	0.003	0.010
Methylcyclohexane	N.D.	0.001	0.005
Methylene Chloride	N.D.	0.0005	0.001
Styrene	N.D.	0.001	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0005	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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Tetrachloroethene	N.D.	0.0005	0.001
Toluene	N.D.	0.0005	0.001
1,2,4-Trichlorobenzene	N.D.	0.001	0.005
1,1,1-Trichloroethane	N.D.	0.0005	0.001
1,1,2-Trichloroethane	N.D.	0.0005	0.001
Trichloroethene	N.D.	0.0005	0.001
Trichlorofluoromethane	N.D.	0.0005	0.001
Vinyl Chloride	N.D.	0.0005	0.001
Xylene (Total)	N.D.	0.0005	0.001
Batch number: K181721AA	Sample number(s): 9660585,9660587,9660589		
Benzene	N.D.	0.0001	0.0005
Ethylbenzene	N.D.	0.0001	0.0005
Toluene	N.D.	0.0001	0.0005
Xylene (Total)	N.D.	0.0001	0.0005
Batch number: 18168B20A	Sample number(s): 9660575-9660584,9660586,9660588-9660589		
TPH-GRO AK water C6-C10	N.D.	0.010	0.10
Batch number: 181660050A	Sample number(s): 9660575-9660584,9660586		
DRO C10-C25	N.D.	0.050	0.25
Batch number: 181730033A	Sample number(s): 9660585,9660587		
C10-<C25 DRO	N.D.	0.050	0.25
C25-C36 RRO	N.D.	0.075	0.25

LCS/LCSD

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
Batch number: 4181741AA	Sample number(s): 9660575-9660584,9660586,9660588-9660589								
Acetone	0.150	0.189	0.150	0.215	126	144	54-157	13	30
Benzene	0.0200	0.0188	0.0200	0.0203	94	102	80-120	8	30
Bromodichloromethane	0.0200	0.0162	0.0200	0.0169	81	84	71-120	4	30
Bromoform	0.0200	0.0142	0.0200	0.0152	71	76	59-120	7	30
Bromomethane	0.0200	0.0163	0.0200	0.0172	82	86	58-130	5	30
2-Butanone	0.150	0.118	0.150	0.127	79	85	59-135	7	30
Carbon Disulfide	0.0200	0.0135	0.0200	0.0140	67	70	65-128	4	30
Carbon Tetrachloride	0.0200	0.0172	0.0200	0.0181	86	91	64-134	5	30
Chlorobenzene	0.0200	0.0200	0.0200	0.0216	100	108	80-120	8	30
Chloroethane	0.0200	0.0149	0.0200	0.0157	75	79	61-123	5	30
Chloroform	0.0200	0.0177	0.0200	0.0189	89	95	80-120	7	30
Chloromethane	0.0200	0.0142	0.0200	0.0152	71	76	63-120	7	30

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

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
Cyclohexane	0.0200	0.0167	0.0200	0.0179	84	90	67-121	7	30
1,2-Dibromo-3-chloropropane	0.0200	0.0152	0.0200	0.0172	76	86	53-128	12	30
Dibromochloromethane	0.0200	0.0167	0.0200	0.0177	84	89	71-120	6	30
1,2-Dibromoethane	0.0200	0.0180	0.0200	0.0199	90	100	75-120	10	30
1,2-Dichlorobenzene	0.0200	0.0189	0.0200	0.0212	95	106	80-120	11	30
1,3-Dichlorobenzene	0.0200	0.0187	0.0200	0.0211	93	105	80-120	12	30
1,4-Dichlorobenzene	0.0200	0.0192	0.0200	0.0217	96	108	80-120	12	30
Dichlorodifluoromethane	0.0200	0.0156	0.0200	0.0170	78	85	47-124	9	30
1,1-Dichloroethane	0.0200	0.0174	0.0200	0.0187	87	93	80-120	7	30
1,2-Dichloroethane	0.0200	0.0169	0.0200	0.0183	85	92	73-124	8	30
1,1-Dichloroethene	0.0200	0.0185	0.0200	0.0206	93	103	80-131	10	30
cis-1,2-Dichloroethene	0.0200	0.0191	0.0200	0.0207	95	104	80-120	8	30
trans-1,2-Dichloroethene	0.0200	0.0186	0.0200	0.0200	93	100	80-120	7	30
1,2-Dichloropropane	0.0200	0.0186	0.0200	0.0202	93	101	80-120	8	30
cis-1,3-Dichloropropene	0.0200	0.0158	0.0200	0.0167	79	84	75-120	6	30
trans-1,3-Dichloropropene	0.0200	0.0161	0.0200	0.0170	81	85	76-120	5	30
Ethylbenzene	0.0200	0.0189	0.0200	0.0203	95	101	80-120	7	30
Freon 113	0.0200	0.0188	0.0200	0.0202	94	101	68-137	7	30
2-Hexanone	0.100	0.0759	0.100	0.0812	76	81	50-141	7	30
Isopropylbenzene	0.0200	0.0186	0.0200	0.0200	93	100	80-120	7	30
Methyl Acetate	0.0200	0.0150	0.0200	0.0167	75	83	64-130	11	30
Methyl Tertiary Butyl Ether	0.0200	0.0151	0.0200	0.0162	75	81	75-120	7	30
4-Methyl-2-pentanone	0.100	0.0751	0.100	0.0808	75	81	62-133	7	30
Methylcyclohexane	0.0200	0.0178	0.0200	0.0194	89	97	67-121	8	30
Methylene Chloride	0.0200	0.0188	0.0200	0.0200	94	100	80-120	6	30
Styrene	0.0200	0.0188	0.0200	0.0201	94	100	80-120	6	30
1,1,2,2-Tetrachloroethane	0.0200	0.0181	0.0200	0.0206	90	103	72-120	13	30
Tetrachloroethene	0.0200	0.0190	0.0200	0.0204	95	102	80-120	7	30
Toluene	0.0200	0.0193	0.0200	0.0210	96	105	80-120	8	30
1,2,4-Trichlorobenzene	0.0200	0.0161	0.0200	0.0178	81	89	70-120	10	30
1,1,1-Trichloroethane	0.0200	0.0163	0.0200	0.0173	81	87	67-126	6	30
1,1,2-Trichloroethane	0.0200	0.0195	0.0200	0.0211	97	106	80-120	8	30
Trichloroethene	0.0200	0.0179	0.0200	0.0194	90	97	80-120	8	30
Trichlorofluoromethane	0.0200	0.0168	0.0200	0.0180	84	90	60-136	7	30
Vinyl Chloride	0.0200	0.0147	0.0200	0.0162	74	81	68-120	9	30
Xylene (Total)	0.0600	0.0571	0.0600	0.0619	95	103	80-120	8	30
Batch number: K181721AA	Sample number(s): 9660585,9660587,9660589								
Benzene	0.00500	0.00464			93		70-130		
Ethylbenzene	0.00500	0.00507			101		70-130		
Toluene	0.00500	0.00492			98		70-130		
Xylene (Total)	0.0150	0.0150			100		70-130		
	mg/l	mg/l	mg/l	mg/l					

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

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
Batch number: 18168B20A	Sample number(s): 9660575-9660584,9660586,9660588-9660589								
TPH-GRO AK water C6-C10	1.10	1.16	1.10	1.13	106	103	60-120	3	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 181660050A	Sample number(s): 9660575-9660584,9660586								
DRO C10-C25	4.00	3.34	4.00	2.93	83	73*	75-125	13	20
Batch number: 181730033A	Sample number(s): 9660585,9660587								
C10-<C25 DRO	1.00	0.940	1.00	0.896	94	90	75-125	5	20
C25-C36 RRO	1.80	1.89	1.80	1.79	105	100	60-120	5	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: TCL 4.3 VOCs
Batch number: 4181741AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9660575	97	104	100	94
9660576	91	101	103	99
9660577	95	103	101	92
9660578	90	100	103	97
9660579	98	106	100	93
9660580	96	102	100	92
9660581	98	105	100	92
9660582	96	104	101	95
9660583	97	105	99	94
9660584	99	107	101	92
9660586	92	97	102	98
9660588	97	103	101	92
9660589	96	106	101	93
Blank	96	104	101	94
LCS	93	100	101	97
LCSD	93	101	101	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs by 524.2 - Water
Batch number: K181721AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
9660585	94	109

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

Surrogate Quality Control (continued)

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

Analysis Name: VOCs by 524.2 - Water
Batch number: K181721AA

	4-Bromofluorobenzene	1,2-Dichlorobenzene-d4
9660587	94	107
9660589	91	105
Blank	94	107
LCS	105	109
Limits:	80-120	80-120

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 18168B20A

	Trifluorotoluene-F
9660575	90
9660576	92
9660577	91
9660578	98
9660579	91
9660580	90
9660581	91
9660582	90
9660583	91
9660584	92
9660586	98
9660588	90
9660589	90
Blank	90
LCS	98
LCSD	98
Limits:	60-120

Analysis Name: AK 102-SV DRO
Batch number: 181660050A

	Orthoterphenyl
9660575	80
9660576	172*
9660577	84
9660578	80
9660579	85
9660580	66
9660581	89
9660582	88
9660583	81
9660584	92

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 06/28/2018 09:26

Group Number: 1955344

Surrogate Quality Control (continued)

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

Analysis Name: AK 102-SV DRO
Batch number: 181660050A

	Orthoterphenyl
9660586	74
Limits:	50-150

	Orthoterphenyl
Blank	82
LCS	83
LCSD	75
Limits:	60-120

Analysis Name: AK 102/103-SV
Batch number: 181730033A

	Orthoterphenyl	n-Triacontane-d62
9660585	102	105
9660587	99	92
Limits:	50-150	50-150

	Orthoterphenyl	n-Triacontane-d62
Blank	107	104
LCS	102	73
LCSD	94	76
Limits:	60-120	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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Generic Analysis Request/Chain of Custody

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Acct. # 10880 Group # 1955344 Sample # 9660575-89

For Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # CHEVRON 92669 WBS 08.02

Site Address MILE 79 SEWARD HWY, PORTAGE, AK

Chevron PM DAN CARRIER Lead Consultant GHD

Consultant/Office 5610 SILVERADO WAY, ~~PORTAGE~~ ANCHORAGE, AK

Consultant Project Mgr. SIOBHAN PRITCHARD

Consultant Phone # (720) 974-0963

Sampler O. YAN / T. WEAVER

4 Matrix: Soil ☐ Sediment ☐ Water ☒ Ground ☐ Potable ☐ NPDES ☐ Surface ☐ Oil ☐ Air ☐

3 Grab ☒ Composite ☐

5 Analyses Requested

2 Sample Identification	Collected Date	Collected Time	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth	8260 full scan	Oxygenates ____	AK101 TPHG	AK102 TPHD	Silica Gel Cleanup ☐	Lead Total ☐ Diss. ☐ Method ____	VPH/EPH Method ____	RRO (AK103)	BTEX (524.2)
MW-6-W-180611	6/11/18	1338	8		X		X	X					
MW-11-W-180611	6/11/18	1520	8		X		X	X					
MW-12-W-180611	6/11/18	1434	7		X		X	X					
MW-13-W-180611	6/11/18	1615	8		X		X	X					
MW-15-W-180611	6/11/18	1248	8		X		X	X					
MW-16-W-180611	6/11/18	1137	8		X		X	X					
MW-7-W-180612	6/12/18	0947	8		X		X	X					
MW-9-W-180612	6/12/18	1042	8		X		X	X					
MW-14-W-180612	6/12/18	1127	8		X		X	X					
MW-3-W-180612	6/12/18	1227	8		X		X	X					
DWW-1-W-180612	6/12/18	0910	6		X		X	X				X	X
DUP-1-W-180611	6/11/18	—	8		X		X	X					
DUP-2-W-180612	6/12/18	—	6		X			X				X	X

SCR #: _____

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run _____ oxy's on highest hit
- ☐ Run _____ oxy's on all hits

6 Remarks

email results to:

siobhan.pritchard@ghd.com

and

oliver.yan@ghd.com

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

8 Data Package Options (please circle if required)

Type I - Full | Type VI (Raw Data) | Alaska/Type III

Relinquished by	Date	Time	Received by	Date	Time (9)
[signature]	6/13/18	12:15			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commerical Carrier: UPS ____ FedEx X Other ____			Received by [signature]	Date 6-14-18	Time 1010
Temperature Upon Receipt 0.5-18 °C			Custody Seals Intact? Yes / No		

Chevron Generic Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 10880 Group # 1955344 Sample # 9660575-89

Instructions on reverse side correspond with circled numbers.

SCR #: ____

① Client Information

Facility #: CHEVRON 92609 WBS: 08.02

Site Address: MILE 79 SEWARD HWY, PORTAGE, AK

Chevron PM: DAN CARRIER Lead Consultant: GHD

Consultant/Office: 5610 SILVERADO WAY, STE A2, ANCHORAGE, AK

Consultant Project Mgr.: SIOBHAN PRITCHARD

Consultant Phone #: (720) 974-0963

Sampler: O. YAN / T. WEAVER

④ Matrix: ☐ Sediment ☐ Ground ☐ Surface ☐ Soil ☐ Potable ☐ NPDES ☐ Water ☐ Oil ☐ Air

⑤ Analyses Requested: BTEX + MTBE ☐ 8021 ☐ 8260 ☐ Naphth; 8260 full scan; Oxygenates; TPHG AK(2); TPHD ☐ Silica Gel Cleanup; Lead ☐ Total ☐ Diss. Method; VPH/EPH Method; BTEX (524.2)

② Sample Identification	Collected Date	Collected Time	③ Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021/8260/Naphth	8260 full scan	Oxygenates	TPHG AK(2)	TPHD	Lead Total/Diss.	VPH/EPH Method	BTEX (524.2)
DUP-3-W-180612	6/12/18	—	X					6		X		X				
QA-1-W-180612	—	—	—					6		X		X				X

☐ Results in Dry Weight
☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds
☐ 8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

⑥ Remarks

email results to: siobhan.pritchard@ghd.com and oliver.yan@ghd.com

⑦ Turnaround Time Requested (TAT) (please circle)

(Standard) circled, 5 day, 4 day, 72 hour, 48 hour, 24 hour

⑧ Data Package Options (please circle if required)

Type I - Full, Type VI (Raw Data), (Alaska/Type III) circled

⑨

Relinquished by	Date	Time	Received by	Date	Time
[signature]	6/13/18	12:15			
Relinquished by Commerical Carrier: UPS ____ FedEx X Other ____			[signature]	6-14-18	1010

Temperature Upon Receipt 0.5-1.8 °C

Custody Seals Intact? (Yes) No

Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

Issued by Dept. 40 Management 7047.01

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 219170

Group Number(s): 1955344

Client: GHD

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	06/14/2018 10:10
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	AK		

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 ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	6
Paperwork Enclosed:	Yes	Trip Blank Type:	See Below
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Trip Blank Type(s): 4-40 mL vials (HCl), 2-40 mL vials(HCl/ Asc)

Unpacked by Melvin Sanchez (8943) at 15:54 on 06/14/2018

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.5	DT	Wet	Y	Bagged	N
2	DT131	1.8	DT	Wet	Y	Bagged	N

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
MW-13-W-180611	5	8	
Dup-1-W-180611	11	8	

General Comments: Received one empty vial for sample MW-15-W-180611

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	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.
ppb	parts per billion
Dry weight basis	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.

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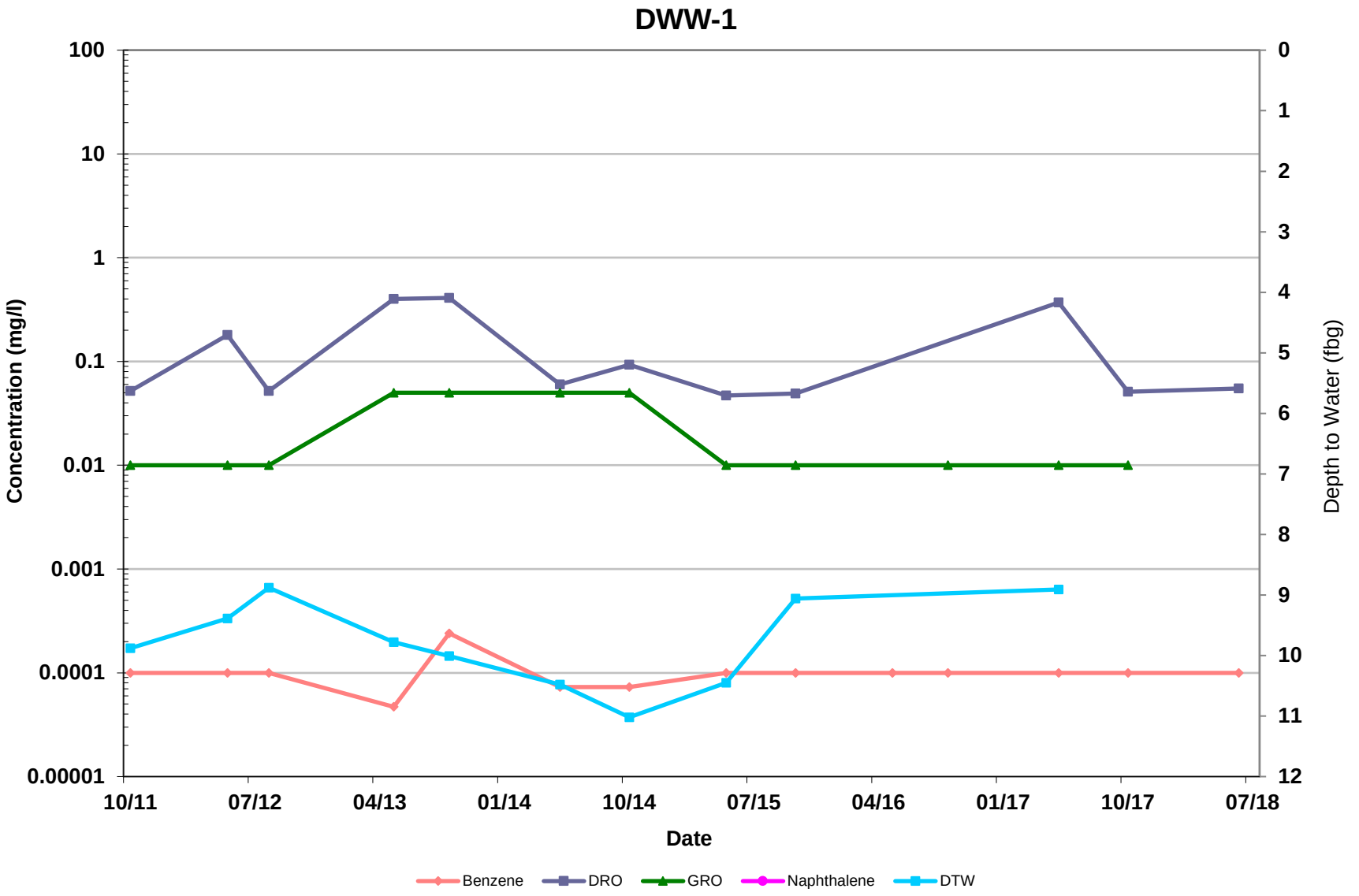
Data Qualifiers

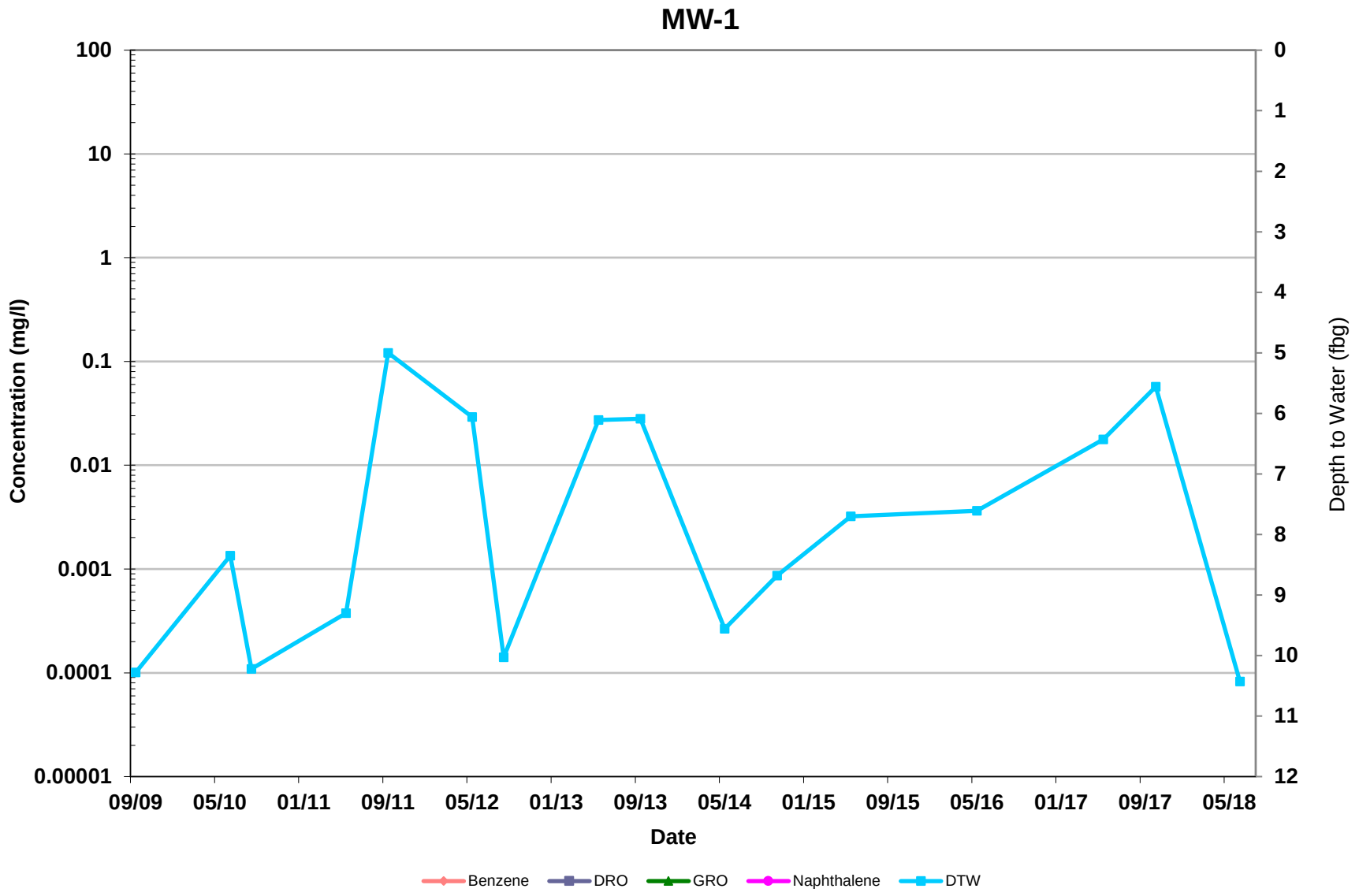
Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the 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 >= 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.
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



Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska



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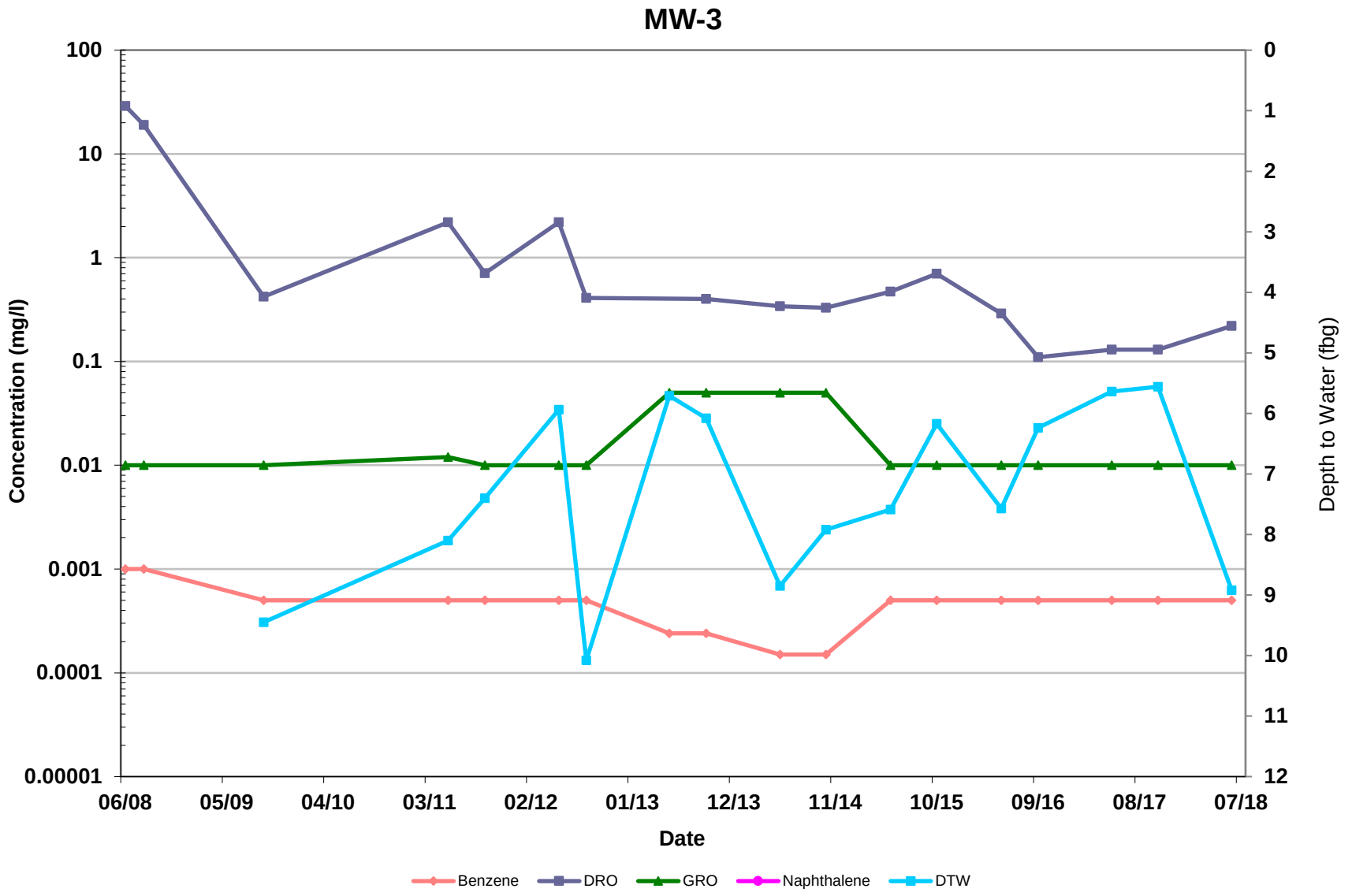
Mile 79 Seward Highway
Girdwood, Alaska



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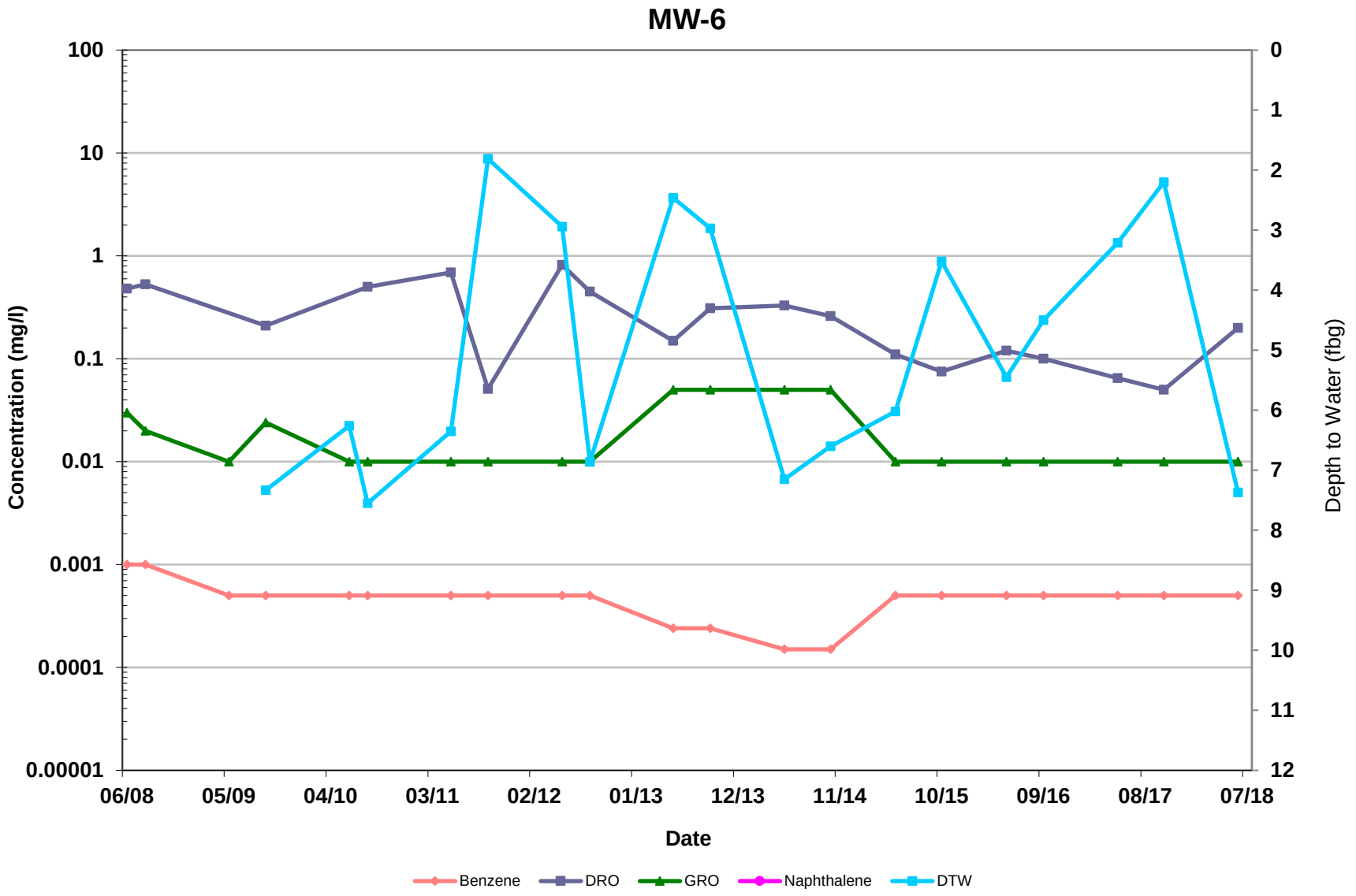
Girdwood, Alaska



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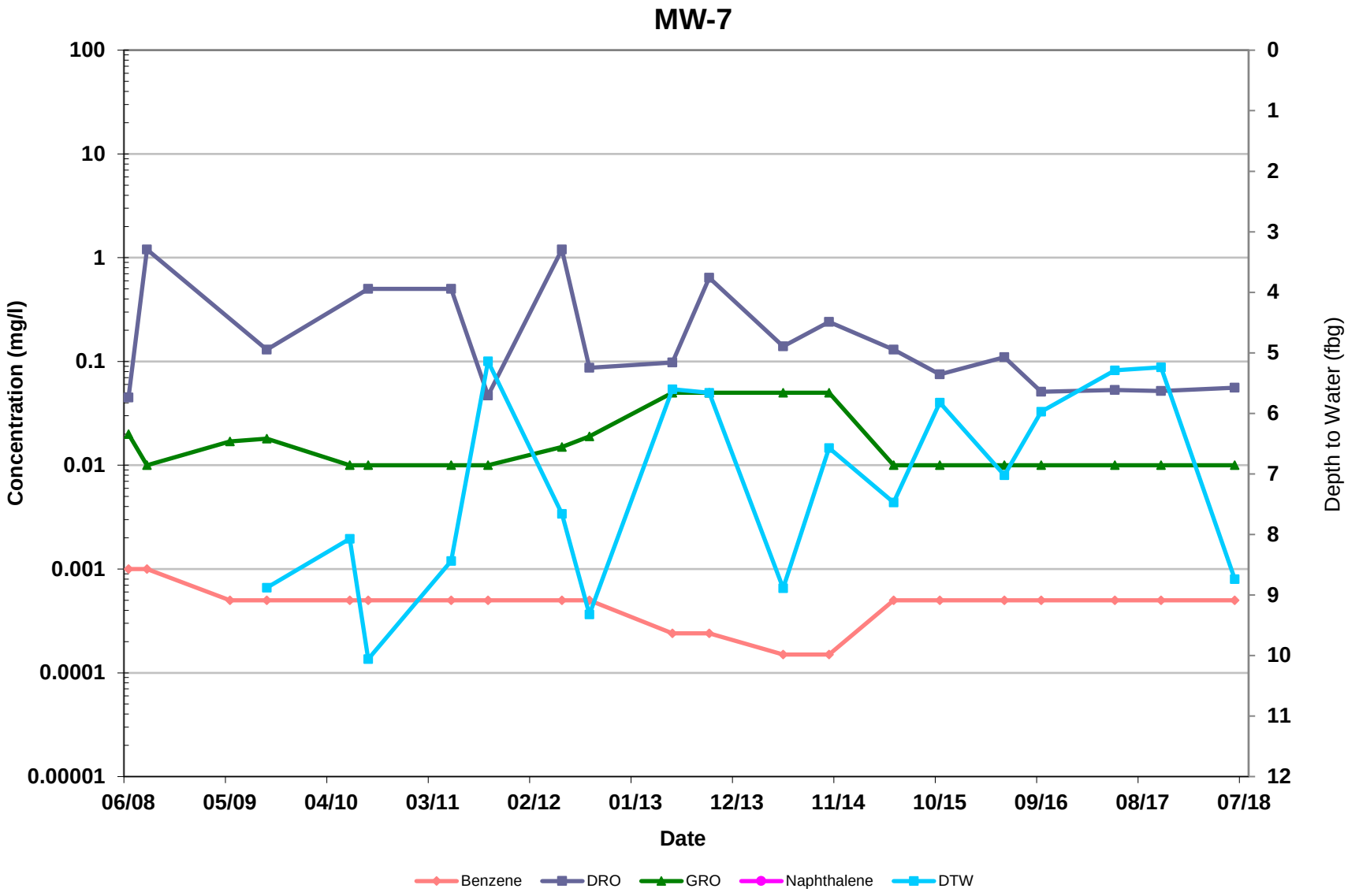
Girdwood, Alaska



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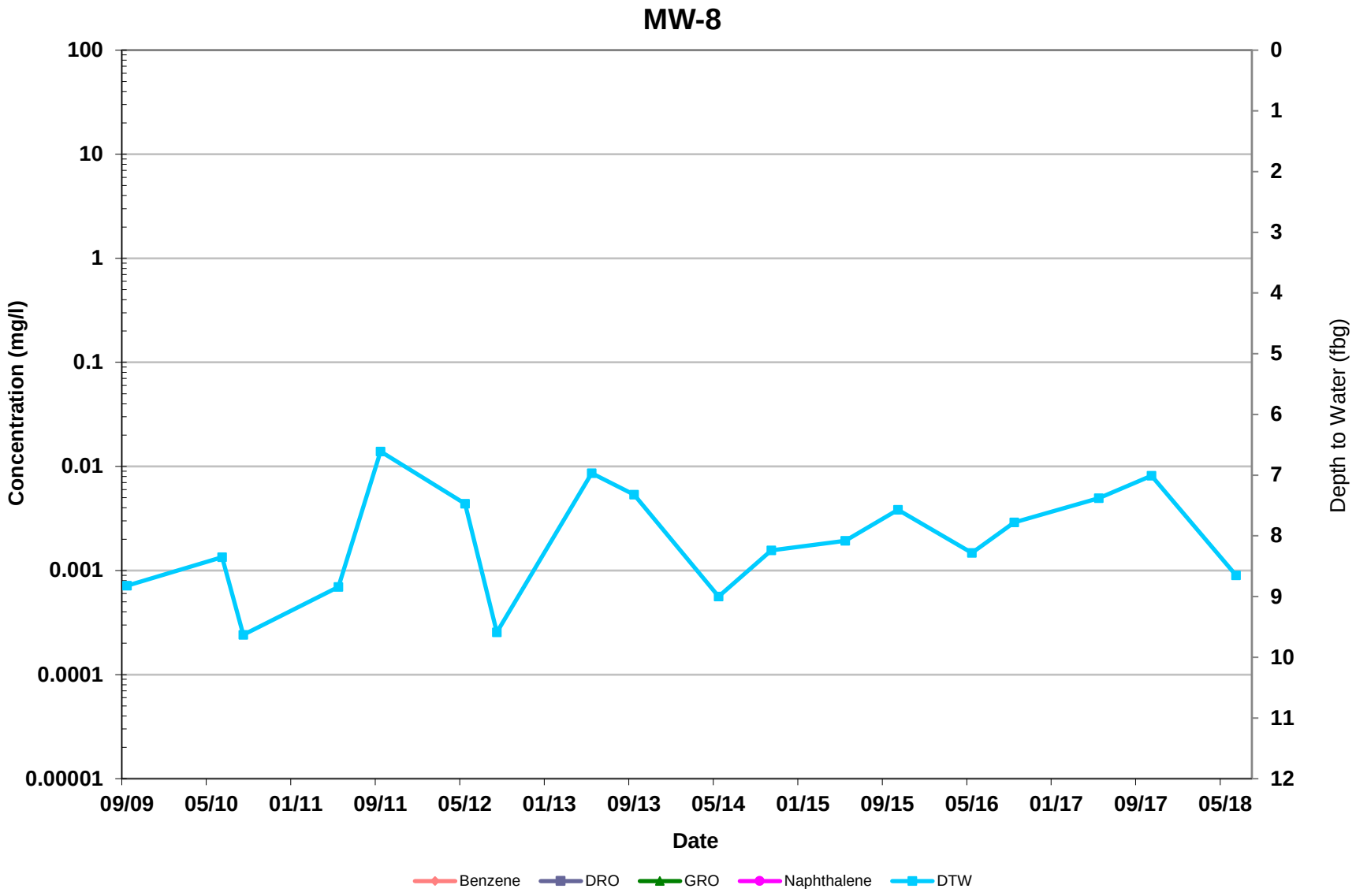

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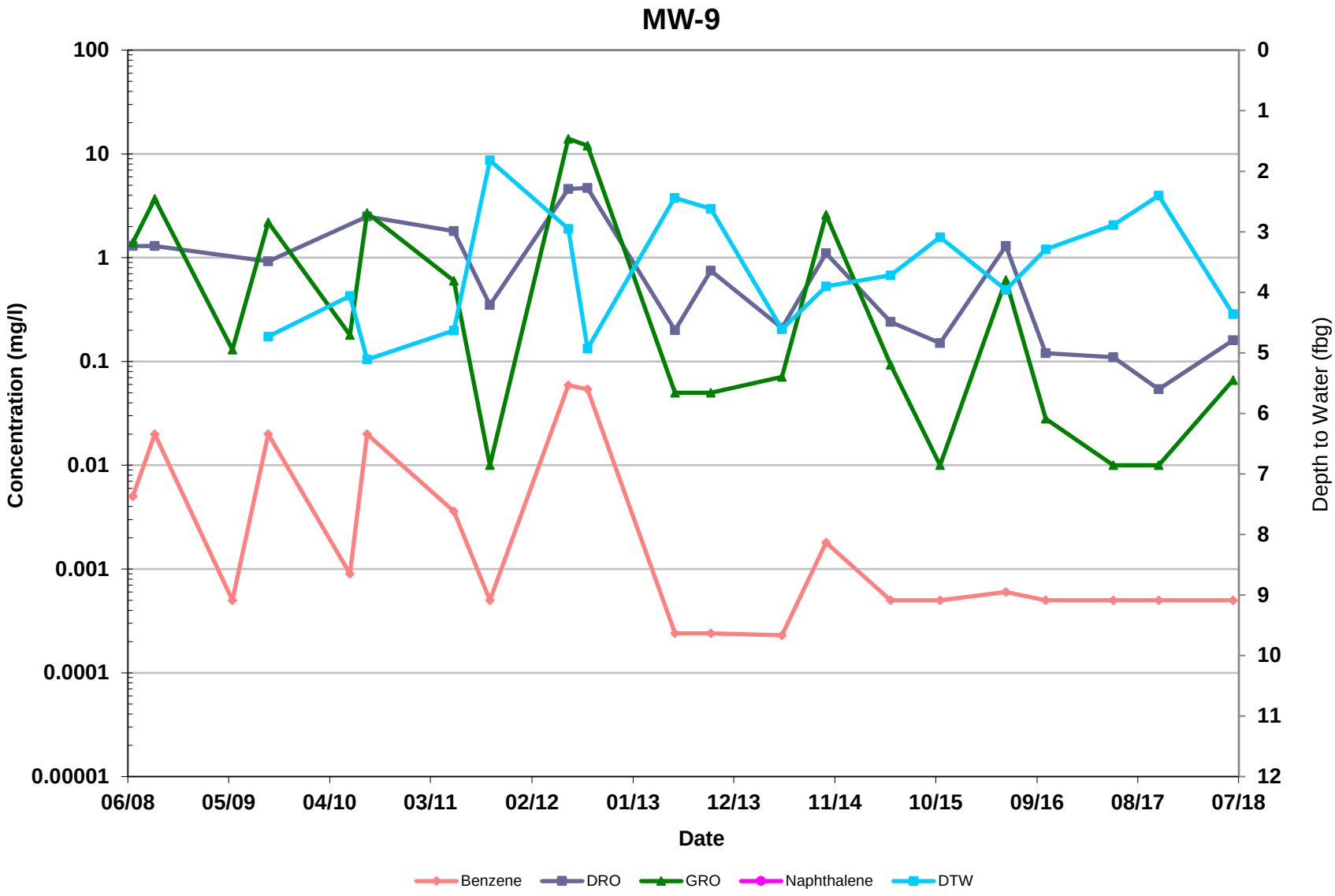
Mile 79 Seward Highway
Girdwood, Alaska



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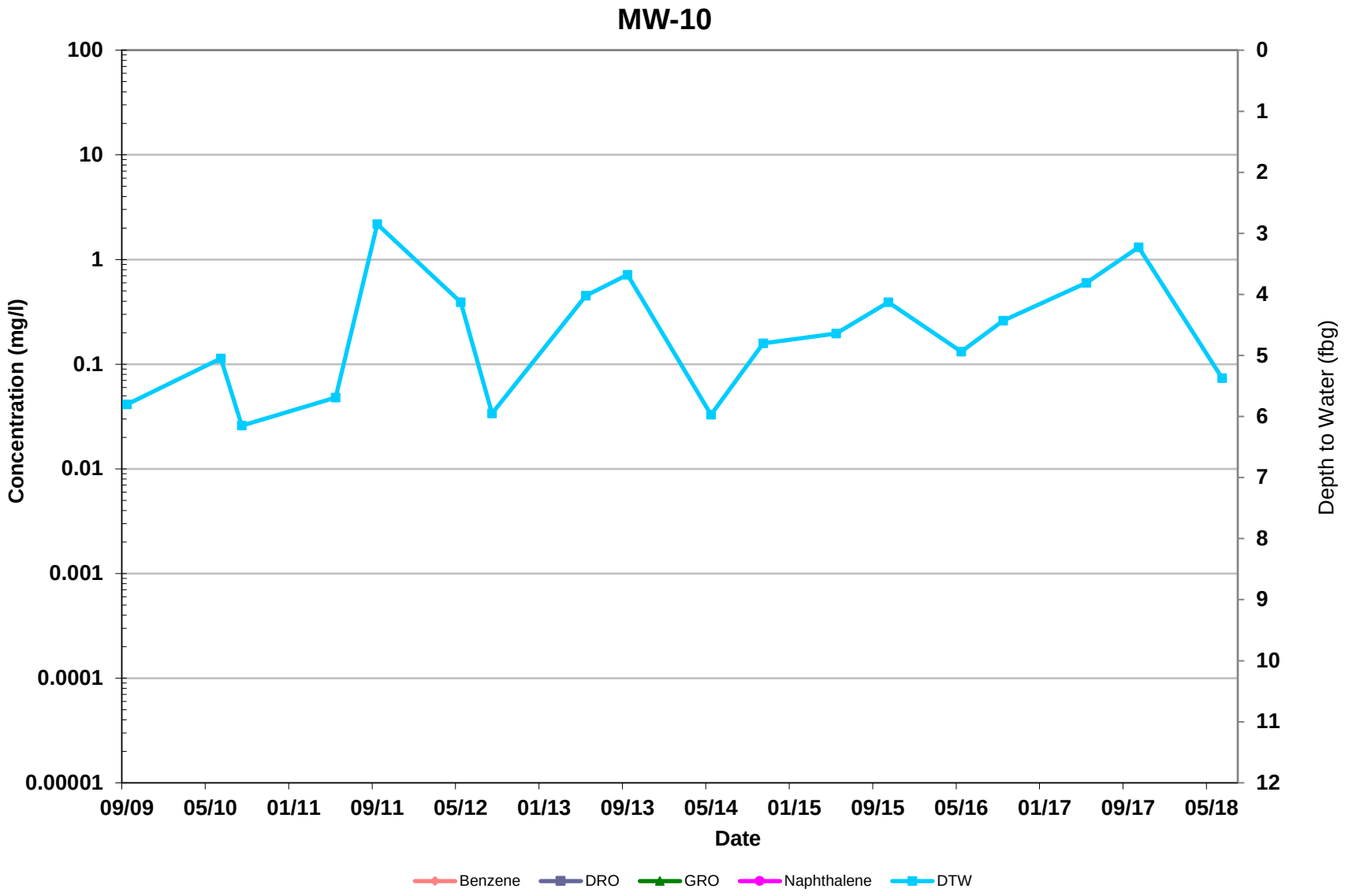

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Mile 79 Seward Highway
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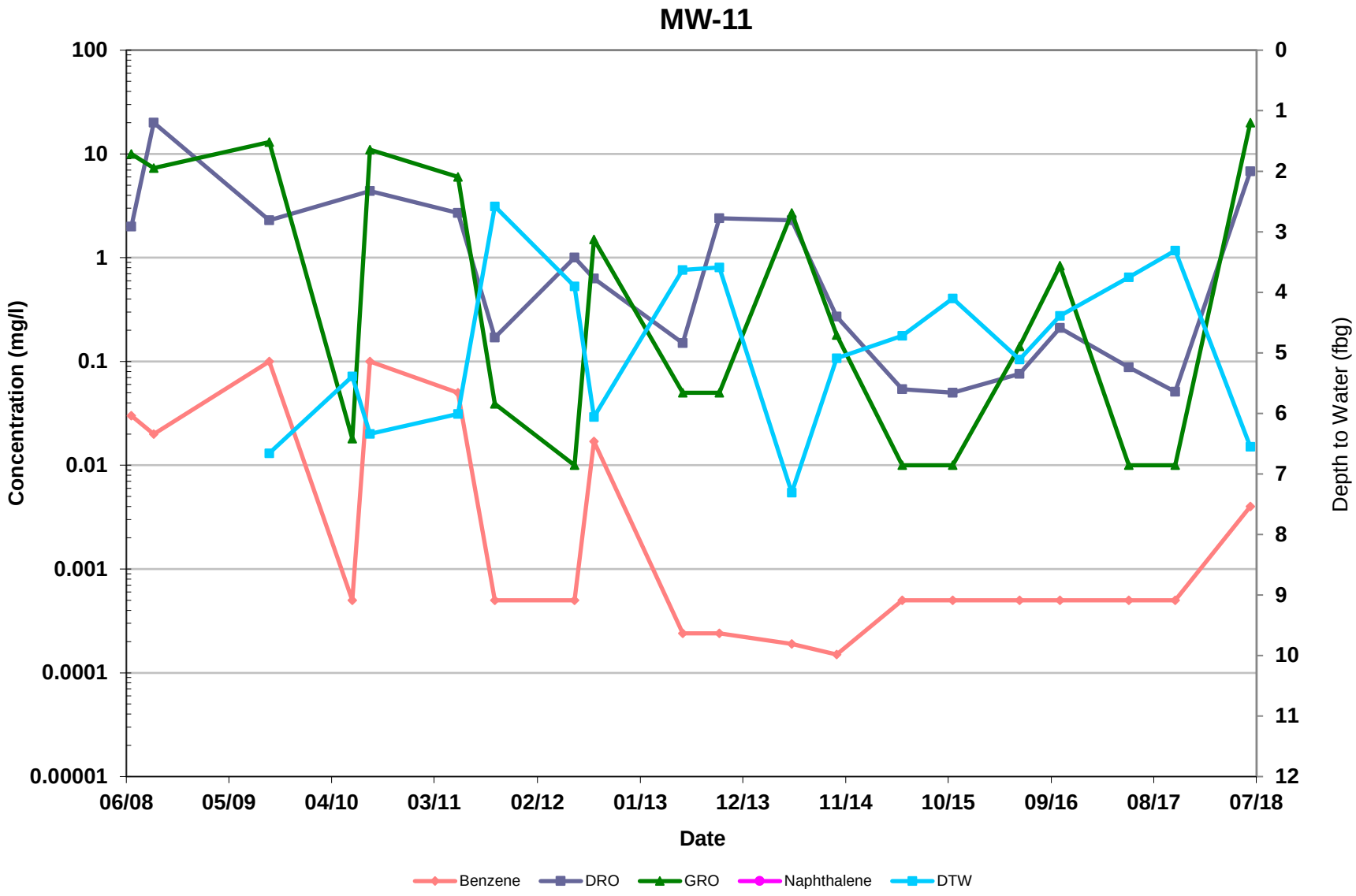

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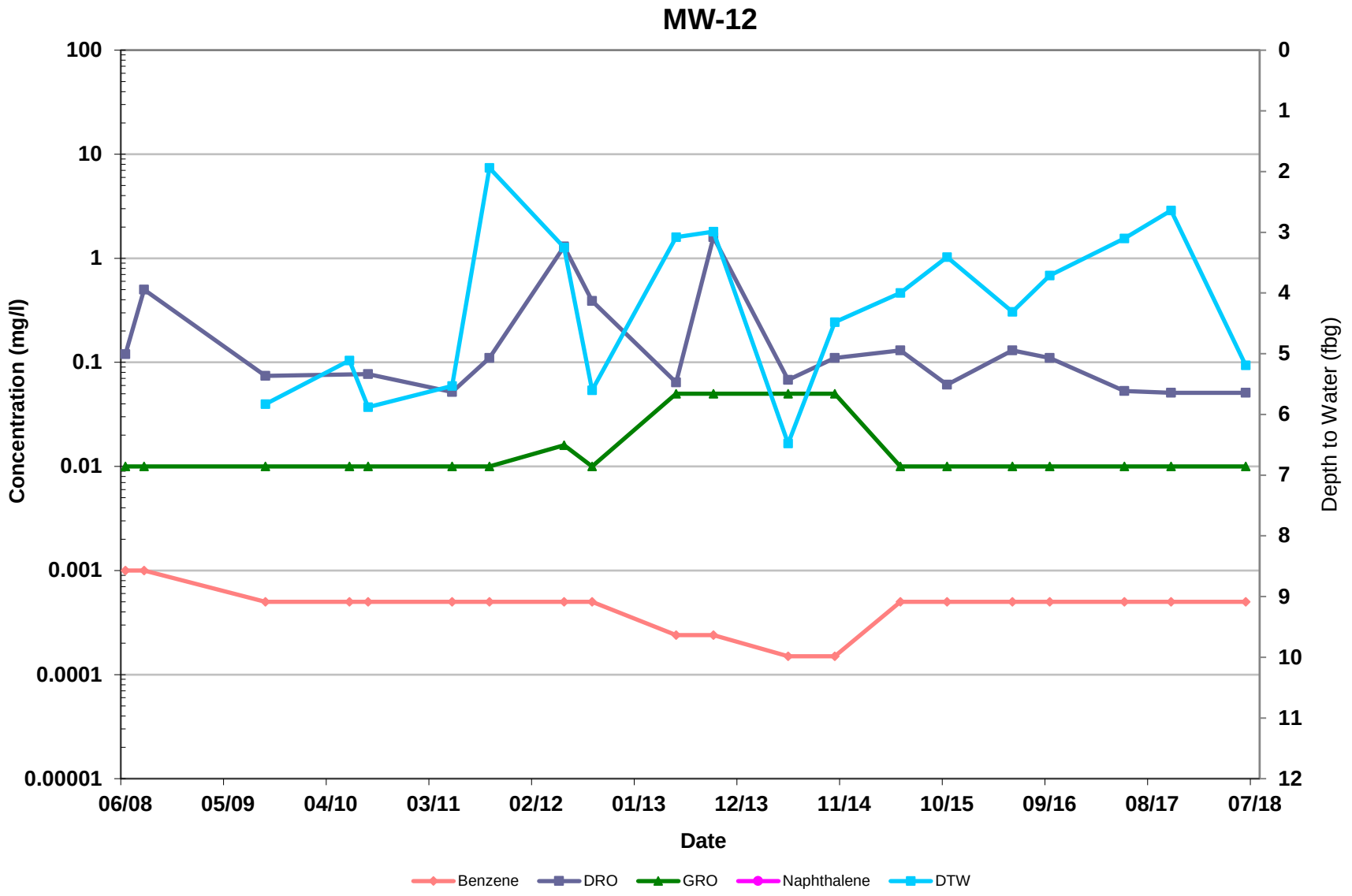
Girdwood, Alaska



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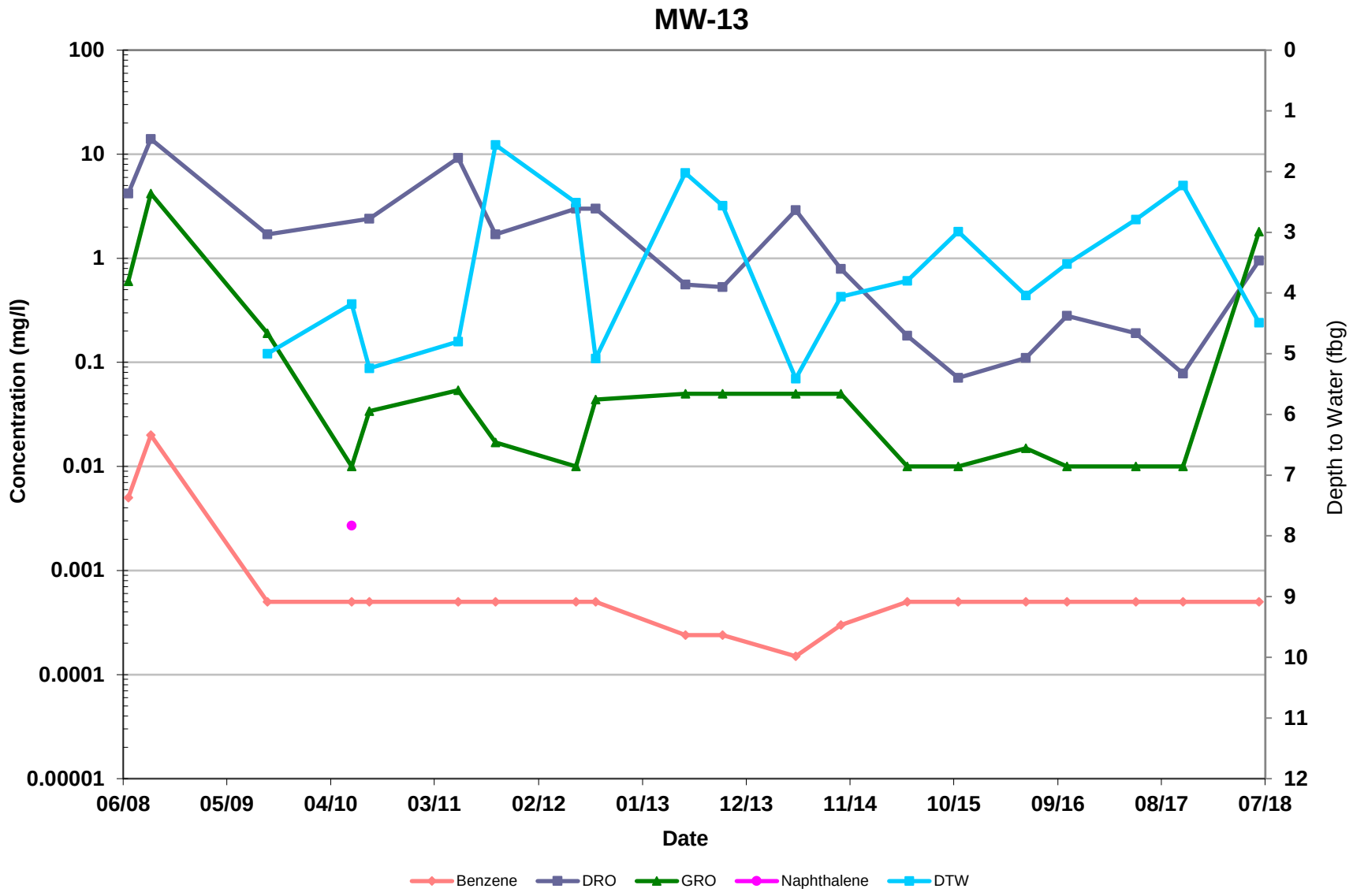
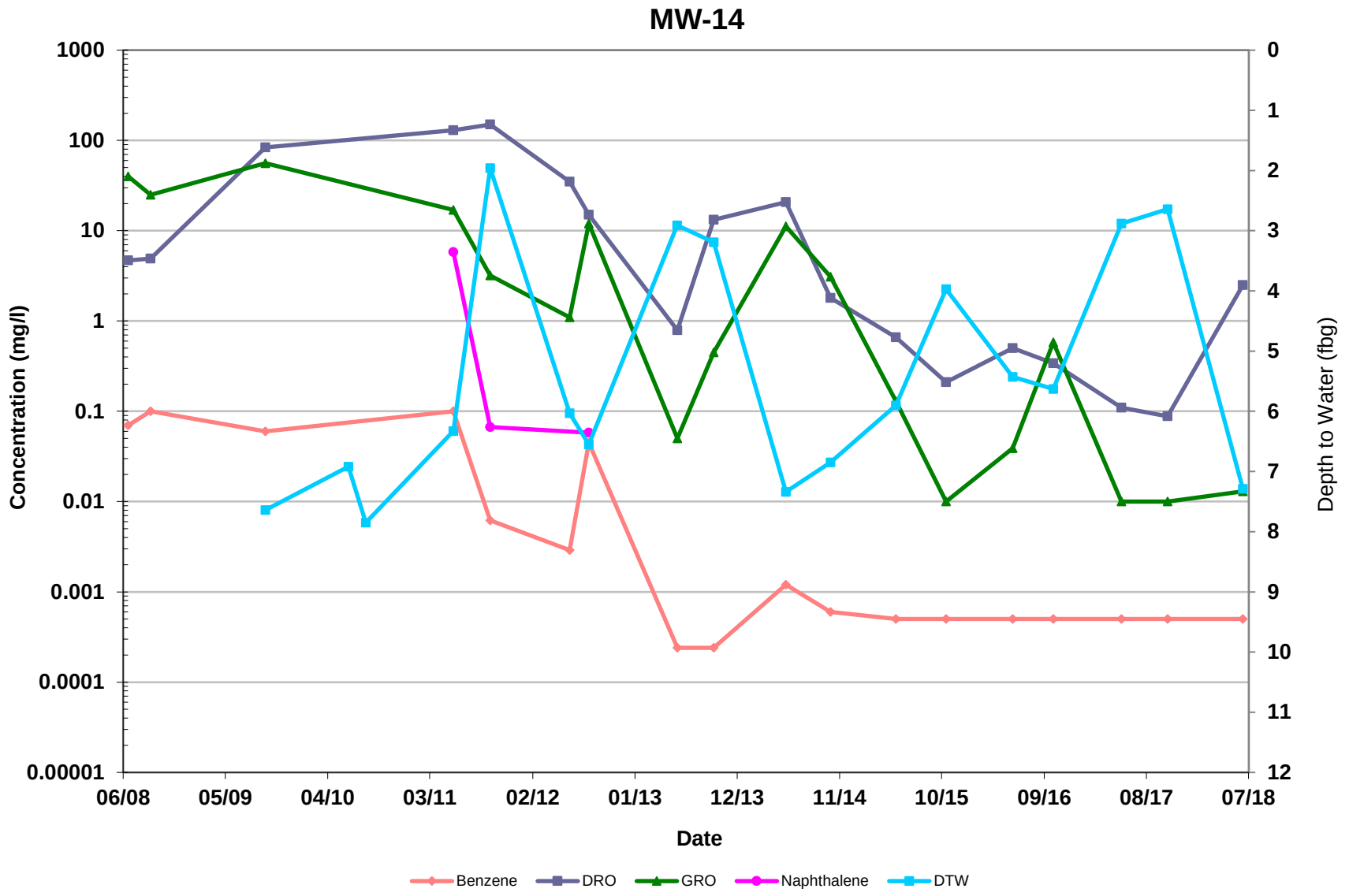
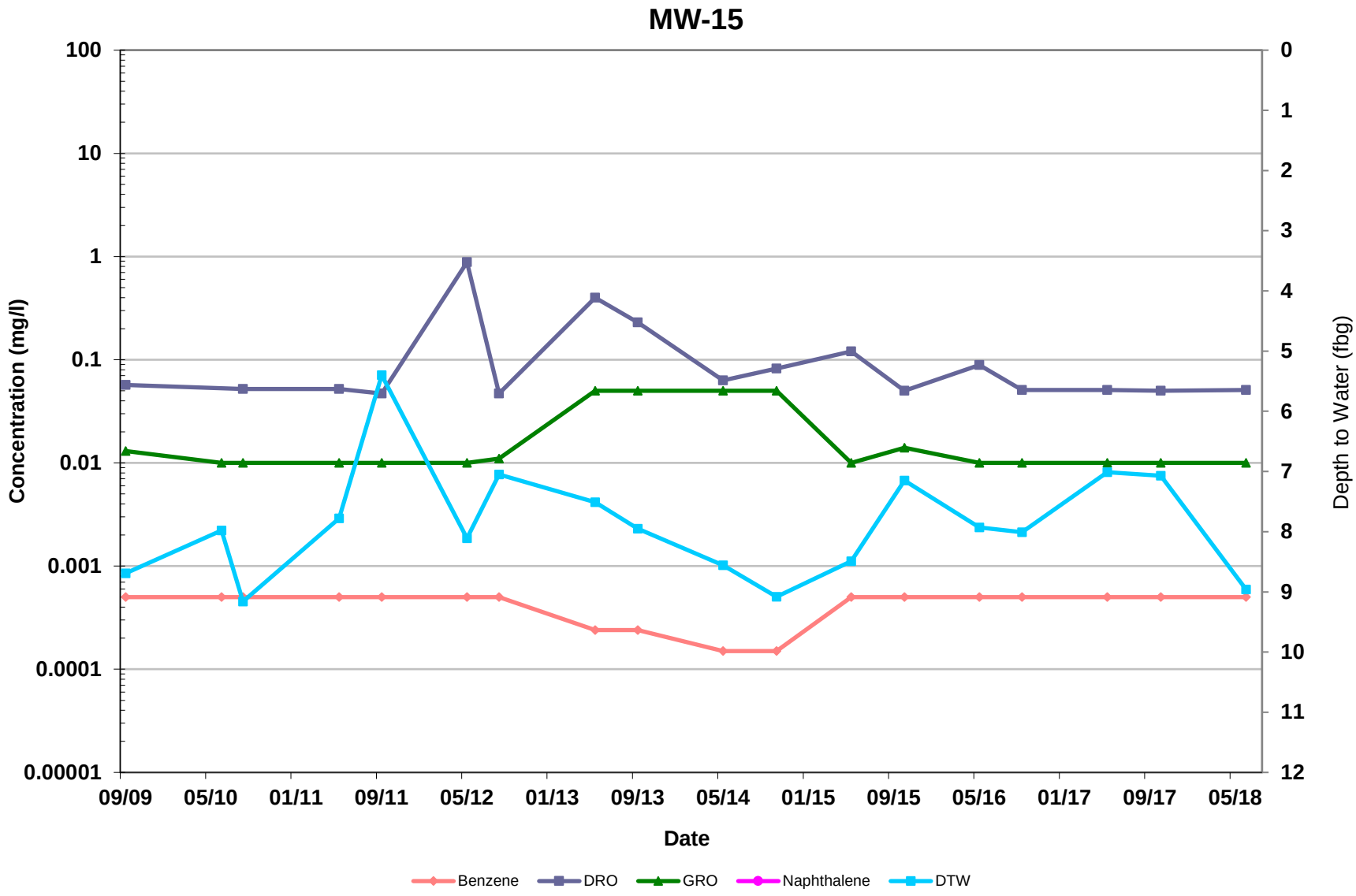
Girdwood, Alaska



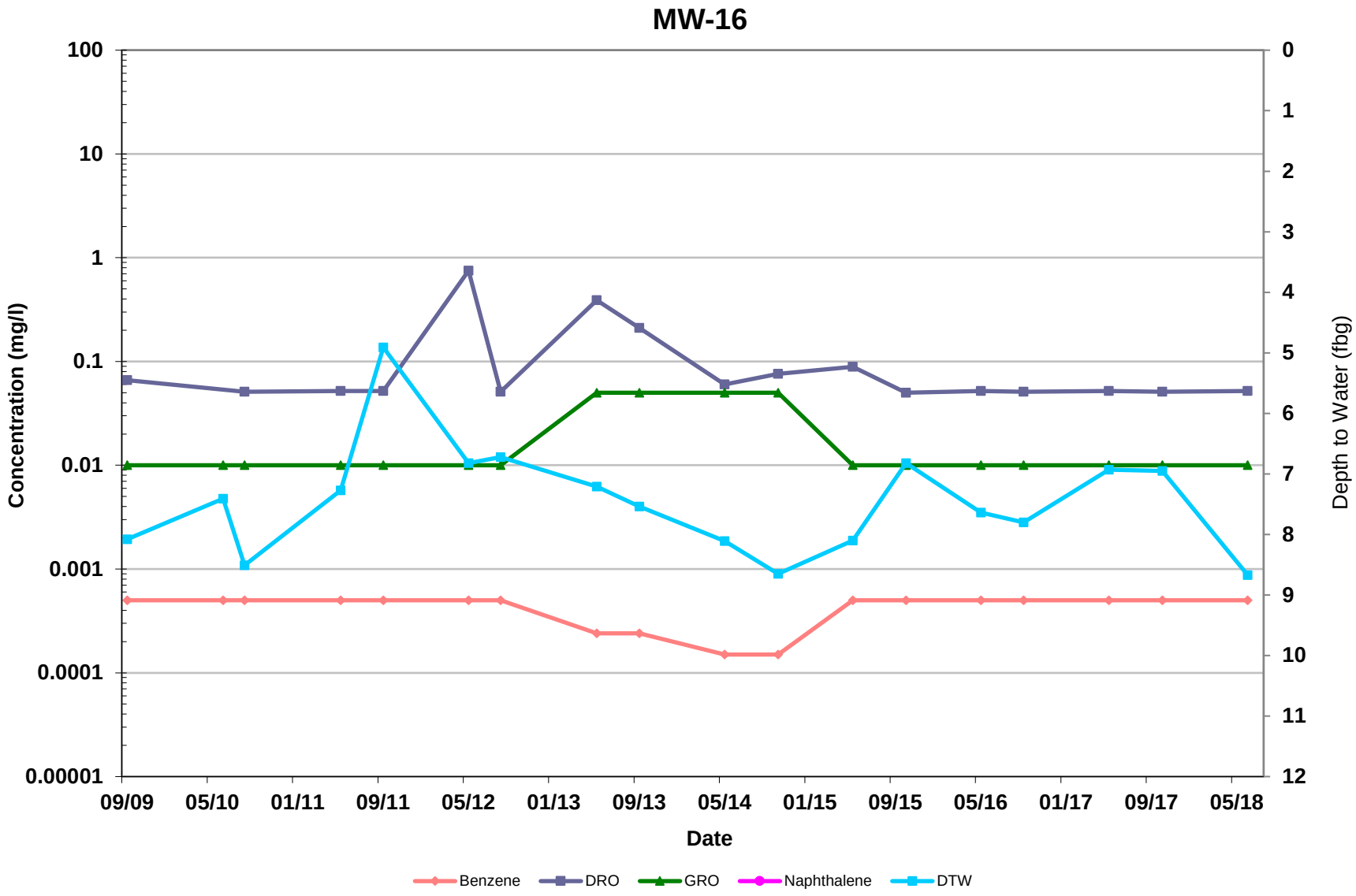
Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska



Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska



Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska



Former Chevron-Branded Service Station 92609
Mile 79 Seward Highway
Girdwood, Alaska

Appendix F
ADEC Laboratory Data Review Checklist and Memorandum

Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

July 09, 2018

CS Report Name:

First Semiannual 2018 Groundwater Monitoring Report

Report Date:

June 28, 2018

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

1955344

ADEC File Number:

2110.38.007

Hazard Identification Number:

2007

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:

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:

c. Were all corrective actions documented?

(•) Yes ( ) No Comments:

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:

The method AK102 LCS/LCSD set had a low DRO recovery

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:

MW-3, MW-6, MW-7, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16

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

◉ Yes ○ No Comments:

vii. Data quality or usability affected?

Comments:

The DRO results for samples MW-3, MW-6, MW-7, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16 were qualified as estimated due to the implied low bias

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:

Sample MW-11 had a low DRO surrogate recovery

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

◉ Yes ○ No Comments:

iv. Data quality or usability affected?

Comments:

The DRO result for sample MW-11 was qualified as estimated due to the implied low bias

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:

The trip blank had acetone present at a low concentration

iv. If above LOQ, what samples are affected?

Comments:

All associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

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)

RPD (%) = 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:

None

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:

Not collected

ii. If above LOQ, what samples are affected?

Comments:

Not collected

iii. Data quality or usability affected?

Comments:

Not collected

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

a. Defined and appropriate?

(•) Yes ( ) No Comments:

Memorandum

July 12, 2018

To:	ADEC	Ref. No.:	620911
From:	Jeffrey Cloud	Tel:	206-914-3141
cc:	Siobhan Pritchard		

Subject: **QA/QC Review**
ChevronTexaco Site 92609
Job # 1955344
June 2018

1. Introduction

This document details a reduced validation of analytical results for groundwater samples collected in Portage, Alaska during June 2018. Samples were submitted to Eurofins Lancaster Laboratories Environmental, 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 forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples 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)/residual range organics (RRO) 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 with the exception of one low DRO surrogate recovery. The DRO result for sample MW-11 was qualified as estimated due to the implied low bias.

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) with the exception of one low DRO recovery. The DRO results for samples MW-3, MW-6, MW-7, MW-9, MW-11, MW-12, MW-13, MW-14, MW-15 and MW-16 were qualified as estimated due to the implied low bias.

6. Field QA/QC Samples

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

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 with the exception of acetone present at a low concentration. The associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, three field duplicate samples were collected and submitted "blind" to the laboratory. The RPDs associated with these duplicate samples 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.

7. Analyte Reporting

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

8. Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable with the specific qualifications noted herein.