Transmittal

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

Subject: ADEC File ID 2100.26.117

No. of Copies	Description/Title	Drawing No./ Document Ref.	Issue
1	Second Semiannual 2018 Groundwater Monitoring Report	Report 55	

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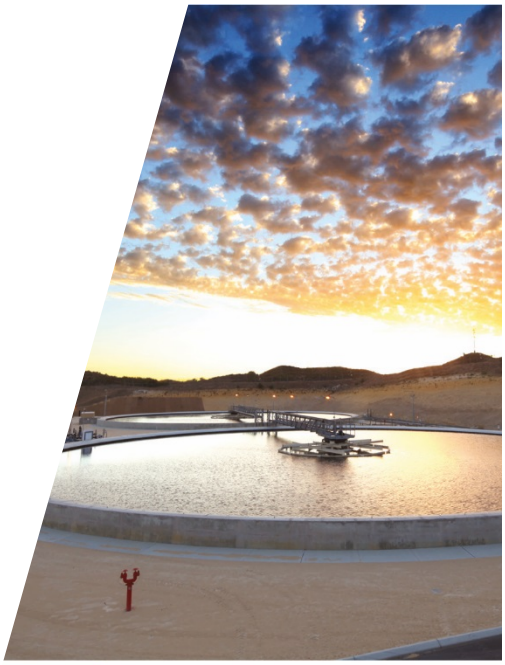
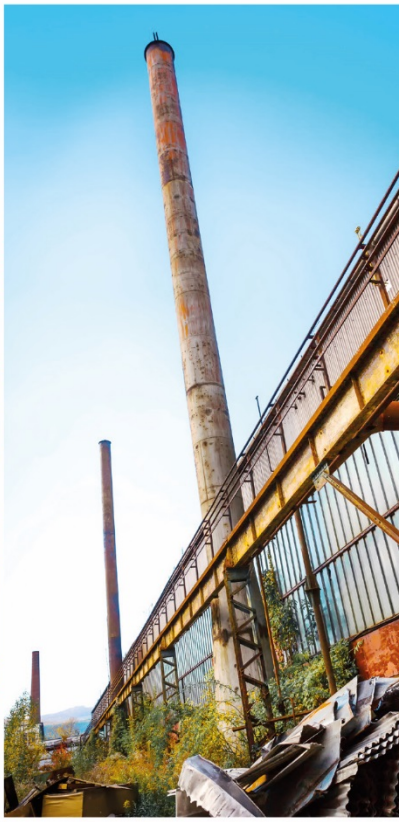


Second Semiannual 2018 Groundwater Monitoring Report

Former Unocal Service Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska
ADEC File ID: 2100.26.117
Hazard ID: 23360



Chevron Environmental Management Company

Second Semiannual 2018 Groundwater Monitoring Report

Former Unocal Service Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska
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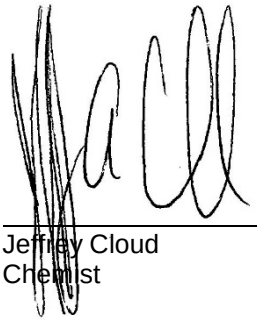
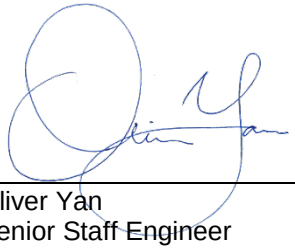
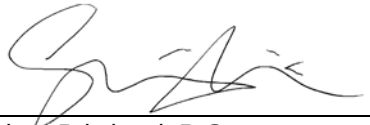


Jeffrey Cloud
Chemist



Oliver Yan
Senior Staff Engineer



Siobhan Pritchard, P.G.
Senior Project Geologist

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Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
BTEX	benzene, toluene, ethylbenzene, and xylenes
COPCs	constituents of potential concern
CSM	conceptual site model
DRO	diesel range organics
EPA	Environmental Protection Agency
ft btoc	feet below top of casing
GAC	granular activated carbon
GHD	GHD Services, Inc.
GRO	gasoline range organics
No	number
P.G.	Professional Geologist
UST	underground storage tank
VOCs	volatile organic compounds

1. Introduction

GHD is submitting this *Second Semiannual 2018 Groundwater Monitoring Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for former Unocal service station 4652/Chevron Site 306448. Groundwater monitoring and sampling was performed by GHD in accordance with the ADEC's August 2017 *Field Sampling Guidance*. Reporting was performed by GHD in accordance with ADEC's March 7, 2017 *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites.*

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

1.1 Site Description and Background

The site is located at 1441 C Street in Anchorage, Alaska (Figure 1). The property's legal description is THIRD ADDITION BLK 31D LT 7A. The latitude and longitude are 61.208085° north and 149.887301° west. The site previously operated as a Unocal service station consisting of three underground storage tanks (USTs), dispenser islands, and piping. The site was demolished in 1987 and is currently a vacant lot.

Land use surrounding the site is primarily commercial with some residential. An apartment complex is located north of the site. Businesses are located south, east and west of the site.

Five groundwater monitoring wells are present onsite and three groundwater monitoring wells are located offsite to the south. Three onsite and three offsite wells are monitored and sampled semiannually (Figure 2). Site photographs are presented in Appendix A.

1.2 Hydrogeology

The site is located in south central Alaska east of Cook Inlet. Historical static groundwater depths have ranged between 3.33 and 14.11 feet below top of casing (ft btoc) from 1986 to present. Static groundwater depths ranged from 6.06 (MW-23) to 10.49 ft btoc (MW-19) on October 10, 2018. Groundwater flow was to the southeast with a gradient of 0.06, 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 in Appendix B.

1.4 Constituents of Potential Concern - Cleanup Levels

Site constituents of potential concern (COPCs) are:

Table 1.1 Constituents of Potential Concern

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

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

GHD gauged groundwater monitoring wells MW-4, MW-5, MW-11A, and MW-19 through MW-23 and sampled groundwater monitoring wells MW-11A, and MW-19 through MW-23 on October 10, 2018. The monitoring data package is presented in Appendix C.

2.1 Low-Flow Purge 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 a water level meter capable of 0.01 foot accuracy. A QED™ Sample Pro bladder pump with a self-contained compressor and control unit was used to purge groundwater from the well. Clean, disposable Teflon™ lined tubing and a bladder 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 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. A grab-groundwater sample was collected upon stabilization. Water quality parameters are considered stable when three successive readings are within the following ADEC limits:

- temperature: ± 3% (minimum of ± 2°C).

- pH: ± 0.1
- conductivity: ± 3 percent
- oxidation/reduction potential: ± 10 millivolts
- dissolved oxygen: ± 10 percent
- turbidity: ± 10 percent

Groundwater samples, including a duplicate sample, were collected in clean sampling media and submitted under chain of custody to Eurofins Lancaster Laboratories of Lancaster, Pennsylvania.

2.2 Data Quality

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

Samples analyzed for VOCs were collected before samples for non-volatile compounds. Groundwater samples, including one duplicate per ten samples collected, were collected directly into clean containers supplied by the laboratory, placed on ice in an insulated cooler and chilled to approximately 4°C (+/-2°C). Coolers were sealed and shipped to Eurofins analytical laboratory under chain-of-custody. Laboratory data was qualified by a GHD chemist and an ADEC lab checklist was completed.

2.3 Purged Groundwater Disposal

Approximately 4.8 gallons of groundwater were filtered through a granular activated carbon (GAC) bucket in a permeable area near the center of the site.

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
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by SW-846 Method 8260

3.2 Groundwater Sampling Results

No DRO, GRO or benzene were detected above ADEC Table C Groundwater Cleanup Levels in samples from MW-19, MW-21, MW-22, and MW-23. Well MW-20 contained the highest concentrations of DRO at 3.7 milligrams per liter (mg/L), GRO at 19 mg/L and benzene at 0.12 mg/L. Current groundwater analytical data are presented in Table 1. Historical groundwater analytical data

are presented in Table 2 and groundwater PAH analytical data are presented in Table 3. The laboratory analytical report is included in Appendix D. Petroleum hydrocarbon concentration graphs are presented in Appendix E.

Laboratory data was qualified by a senior GHD chemist. 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

No DRO, GRO or benzene were detected above regulatory cleanup levels in wells MW-19, and offsite wells MW-21, MW-22, and MW-23. Petroleum hydrocarbon concentrations in groundwater are stable and localized near the former dispenser islands. GHD requests to suspend sampling of wells MW-22 and MW-23 as no petroleum hydrocarbons have been detected above regulatory cleanup levels since 2013. Well MW-21 will continue to be sampled as the downgradient well. GHD will continue to conduct semiannual groundwater monitoring and sampling in 2019.

about GHD

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

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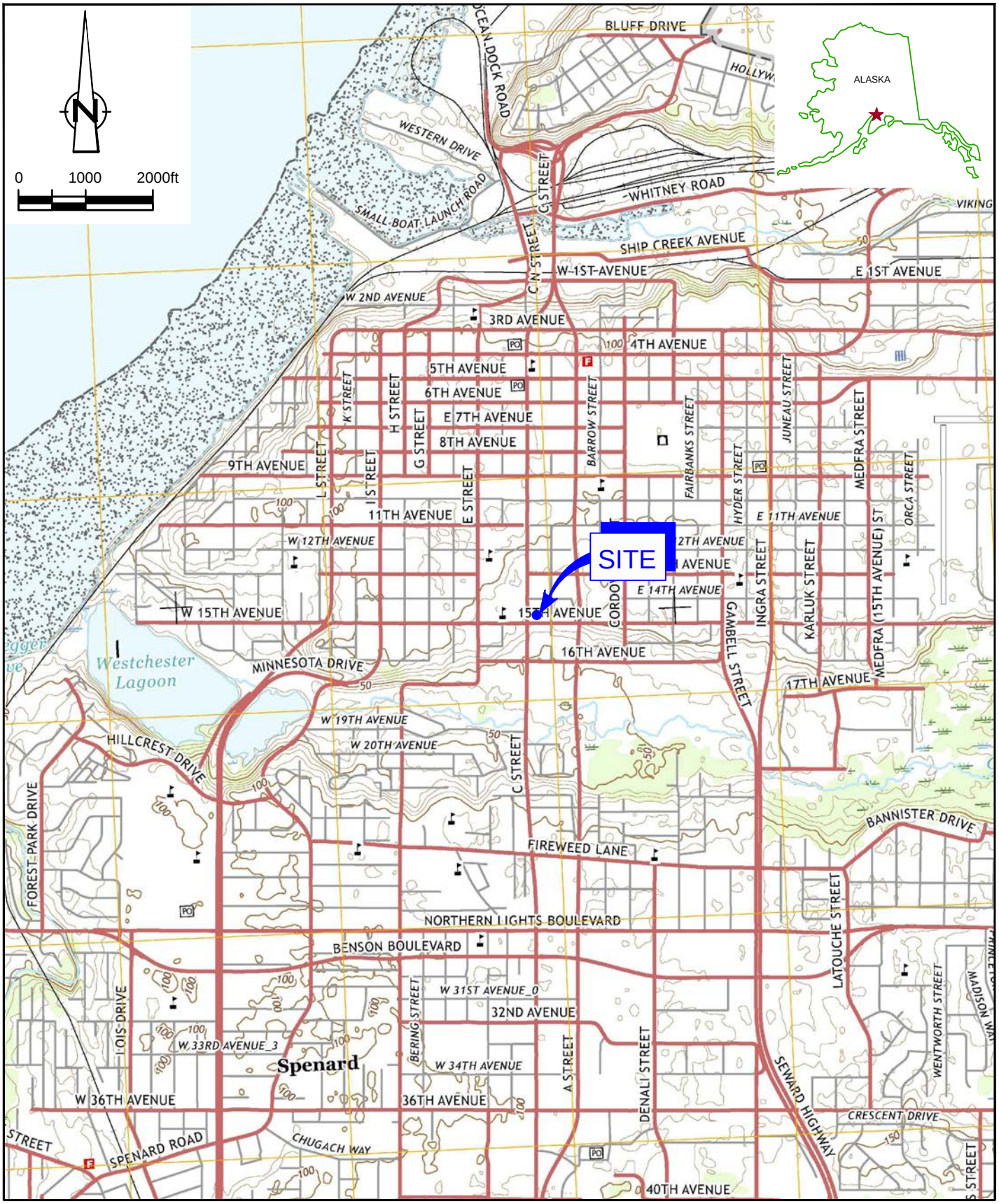
Figures



SOURCE: USGS QUAD MAP; ANCHORAGE A-8 NW, AK, 2015.

FORMER UNOCAL STATION 4652/CHEVRON SITE 306448
1441 C STREET
ANCHORAGE, ALASKA

621049-940418
Nov 9, 2018

VICINITY MAP

FIGURE 1

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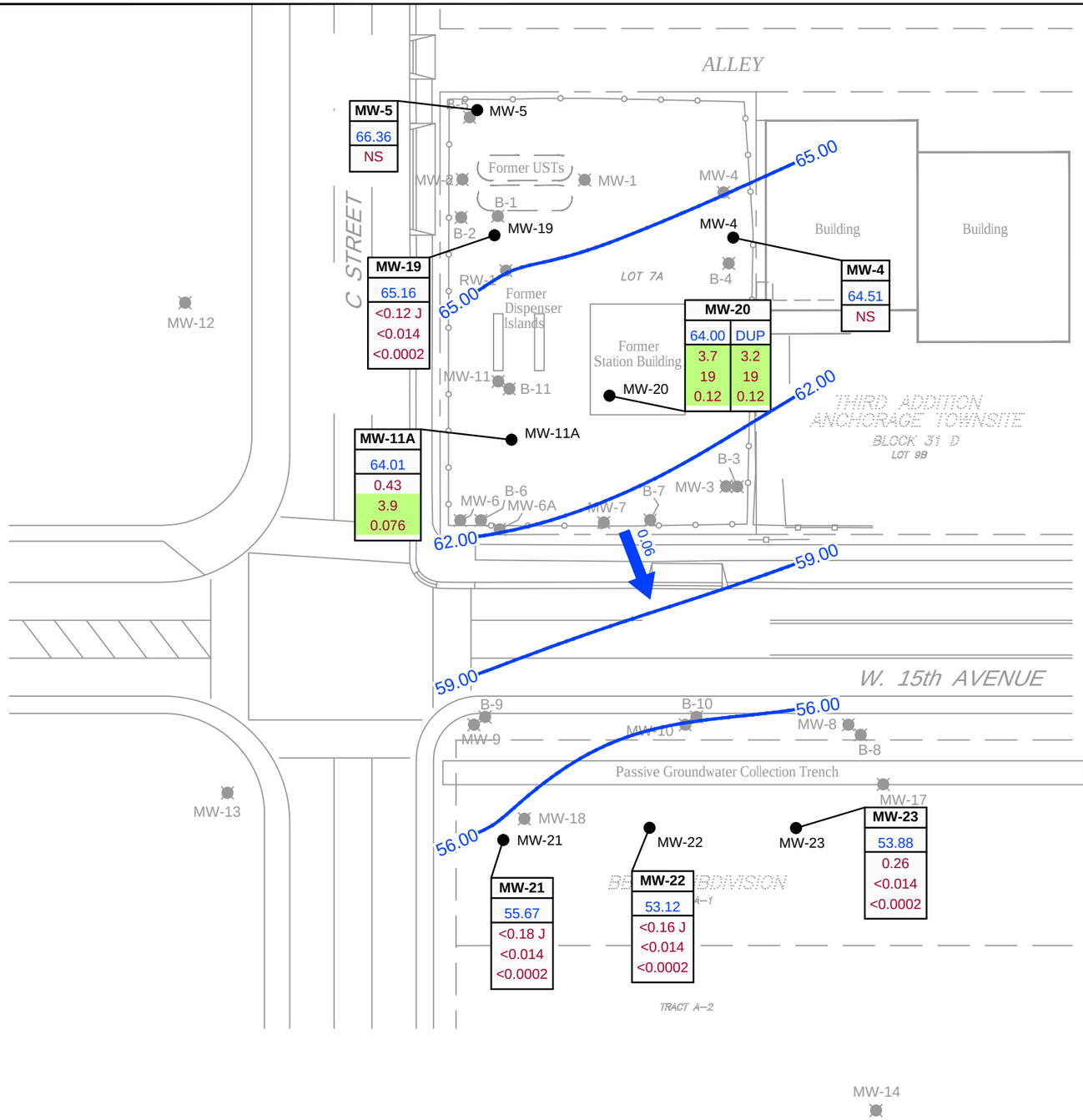
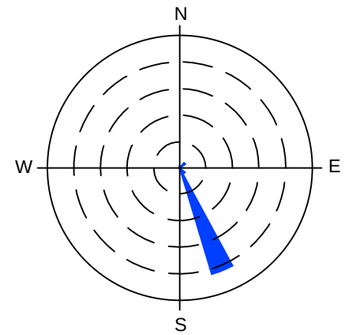


LEGEND

- MONITORING WELL LOCATION
- DESTROYED WELL LOCATION
- 65.00 — GROUNDWATER ELEVATION CONTOUR, IN FEET ABOVE MEAN SEA LEVEL (FT MSL)
- 0.06 — GROUNDWATER FLOW DIRECTION AND GRADIENT
- MW-19 — WELL DESIGNATION
- 65.16 — GROUNDWATER ELEVATION
- <0.12 J — DRO CONCENTRATION (mg/L)
- <0.014 — GRO CONCENTRATION (mg/L)
- <0.0002 — BENZENE CONCENTRATION (mg/L)
- mg/L — MILLIGRAMS PER LITER
- J — ESTIMATED VALUE BETWEEN METHOD DETECTION LIMIT AND LABORATORY REPORTING LIMIT
- NS — NOT SAMPLED

RESULTS HIGHLIGHTED GREEN MEET OR EXCEED ADEC TABLE C GROUNDWATER CLEANUP LEVEL (18 AAC 75.345)



Historic Groundwater Flow Direction
2007 - 2018

0 20 40ft

FORMER UNOCAL STATION 4652/CHEVRON SITE 306448
1441 C STREET
ANCHORAGE, ALASKA

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - OCTOBER 10, 2018

621049-940418
Nov 14, 2018

FIGURE 2

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Tables

Table 1

Current Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS		PRIMARY VOCS			
	Units	ft msl	ft btoc	ft msl	DRO mg/L	GRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L
ADEC Groundwater Cleanup Levels					**1.5**	**2.2**	**0.0046**	**1.1**	**0.015**	**0.19**
MW-4	10/10/2018[1]	73.14	8.63	64.51	--	--	--	--	--	--
MW-5	10/10/2018[1]	76.35	9.99	66.36	--	--	--	--	--	--
MW-11A	10/10/2018	73.45	9.44	64.01	0.43	**3.9**	**0.076**	0.0006 J	0.012	**1.2**
MW-19	10/10/2018	75.65	10.49	65.16	<0.12 J	<0.014	<0.0002	<0.0002	<0.0002	<0.0005
MW-20	10/10/2018	73.73	9.73	64.00	**3.7 / 3.2**	**19 / 19**	**0.12 / 0.12**	0.54 / 0.53	**0.88 / 0.86**	**5.8 / 5.5**
MW-21	10/10/2018	62.87	7.20	55.67	<0.18 J	<0.014	<0.0002	<0.0002	<0.0002	<0.0005
MW-22	10/10/2018	60.88	7.76	53.12	<0.16 J	<0.014	<0.0002	<0.0002	<0.0002	<0.0005
MW-23	10/10/2018	59.94	6.06	53.88	0.26	<0.014	<0.0002	<0.0002	<0.0002	<0.0005
QA	10/10/2018	--	--	--	--	<0.014	<0.0002	<0.0002	<0.0002	<0.0005

Table 1

Current Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Notes and Abbreviations

TOC = top of casing
DTW = depth to water
GWE = groundwater elevation
TPH = total petroleum hydrocarbons
DRO = diesel range organics by Alaska Series Method AK102
GRO = gasoline range organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B or SW-E46 8021B
Total Xylenes = Sum of m-, o-, and p-xylenes
VOC = volatile organic compounds by EPA Method 524.2
ADEC = Alaska Department of Environmental Conservation
[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
[1] = Monitor only

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-1	09/06/1986	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	03/19/1987	-	-	-	-	-	0.3	0.84	**7.39**	**3.19**	**0.054**	1.136	-	-	-
MW-1	10/09/1987	-	-	-	-	-	3.52	-	**22.6**	**1.1**	**0.046**	0.402	-	-	-
MW-1	01/16/1988	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-2	03/19/1987	-	-	-	-	-	6.8	13	**8.28**	**21.1**	**4.26**	**13.48**	-	-	-
MW-2	10/09/1987	-	-	-	-	-	7.69	-	**18.1**	**29.9**	**3.28**	**12.87**	-	-	-
MW-2	01/16/1988	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	08/02/1986	100.07	5.19	94.88	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/06/1986	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-3	09/22/1986	100.07	5.29	94.78	-	-	-	-	-	-	-	-	-	-	-
MW-3	03/19/1987	100.07	6.79	93.28	-	-	0.7	1.7	**0.694**	0.012	**0.069**	**0.275**	-	-	-
MW-3	10/09/1987	100.07	5.33	94.74	-	-	0.26	-	**0.23**	0.028	**0.0175**	**0.275**	-	-	-
MW-3	01/16/1988	100.07	6.45	93.62	-	-	0.012	0.31	**0.653**	0.007	**0.06**	**0.215**	-	-	-
MW-3	05/03/1988	100.07	3.89	96.18	-	-	2.4	7.7	0.002	<0.0002	<0.0002	0.0019	-	-	-
MW-3	07/26/1988	100.07	5.21	94.86	-	-	1.1	-	**0.56**	<0.001	0.0098	<0.001	-	-	-
MW-3	11/17/1988	100.07	5.45	94.62	-	-	1.3	-	**1.1**	0.0075	**0.4**	**2.4**	-	-	-
MW-3	03/13/1989	100.07	6.89	93.18	-	-	1.5	-	**0.87**	0.0068	**0.034**	**0.29**	ND	-	-
MW-3	07/26/1989	100.07	4.85	95.22	-	-	0.8	-	**0.16**	0.023	0.0079	0.066	-	-	-
MW-3	10/09/1989	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	08/02/1986	102.17	5.16	97.01	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/22/1986	102.17	4.77	97.40	-	-	-	-	-	-	-	-	-	-	-
MW-4	10/08/1987	102.17	5.34	96.83	-	-	0.15	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-4	01/15/1988	102.17	5.96	96.21	-	-	0.15	0.17	<0.001	0.0033	<0.001	<0.001	-	-	-
MW-4	05/03/1988	102.17	4.29	97.88	-	-	0.8	7.4	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-
MW-4	07/26/1988	102.17	5.10	97.07	-	-	<0.5	-	0.0002	<0.0002	<0.0002	<0.0002	-	-	-
MW-4	11/17/1988	102.17	5.38	96.79	-	-	<0.4	-	0.0002	0.0005	0.0003	0.0014	-	-	-
MW-4	03/13/1989	102.17	6.30	95.87	-	-	0.45	-	<0.0002	0.0003	<0.0002	0.0009	0.0045	-	-
MW-4	07/26/1989	102.17	4.10	98.07	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-
MW-4	09/27/1990	102.17	5.35	96.82	-	-	<0.4	-	0.003	<0.0002	<0.0002	<0.0002	-	-	-
MW-4	10/09/1990	102.17	5.10	97.07	-	-	2	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-4	03/28/1991	102.17	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	04/19/1991	102.17	5.67	96.50	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/15/1991	102.17	6.04	96.13	-	-	-	-	-	-	-	-	-	-	-
MW-4	07/12/1991	102.17	6.56	95.61	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/26/1991	105.29	9.01	96.28	<0.10	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-4	10/11/1991	105.29	9.32	95.97	-	-	-	-	-	-	-	-	-	-	-
MW-4	01/10/1992	105.29	9.10	96.19	-	-	-	-	-	-	-	-	-	-	-
MW-4	02/17/1992	105.29	10.06	95.23	<0.10	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-4	03/31/1992	105.29	8.91	96.38	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/19/1992	105.29	8.94	96.35	**14** / **16**	<0.1 / <0.1	<1 / <1	-	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	-	-	-
MW-4	06/30/1992	105.29	8.90	96.39	-	-	-	-	-	-	-	-	-	-	-
MW-4	07/15/1992	105.29	9.15	96.14	-	-	-	-	-	-	-	-	-	-	-
MW-4	08/28/1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	10/04/2007	72.25	7.79	64.46	-	-	-	-	-	-	-	-	-	-	-
MW-4	06/19/2008	72.25	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	08/28/2008	73.14	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/19/2011	73.14	8.64	64.50	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-4	05/28/2012	73.14	8.52	64.62	-	-	-	-	-	-	-	-	-	-	-
MW-4	07/31/2012	73.14	8.79	64.35	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/08/2013	73.14	7.55	65.59	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/17/2013	73.14	7.77	65.37	-	-	-	-	-	-	-	-	-	-	-
MW-4	06/07/2014	73.14	8.67	64.47	-	-	-	-	-	-	-	-	-	-	-
MW-4	11/04/2014	73.14	8.82	64.32	-	-	-	-	-	-	-	-	-	-	-
MW-4	04/27/2015	73.14	8.83	64.31	-	-	-	-	-	-	-	-	-	-	-
MW-4	10/23/2015	73.14	7.80	65.34	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/17/2016	73.14	8.68	64.46	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/15/2016	73.14	7.91	65.23	-	-	-	-	-	-	-	-	-	-	-
MW-4	05/09/2017	73.14	8.37	64.77	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/01/2017	73.14	8.11	65.03	-	-	-	-	-	-	-	-	-	-	-
MW-4	06/07/2018	73.14	8.78	64.36	-	-	-	-	-	-	-	-	<	-	-
MW-4	10/10/2018	73.14	8.63	64.51	-	-	-	-	-	-	-	-	<	-	-
MW-5	08/02/1986	105.38	7.14	98.24	-	-	-	-	-	-	-	-	-	-	-
MW-5	09/22/1986	105.38	7.98	97.40	-	-	-	-	-	-	-	-	-	-	-
MW-5	03/19/1987	105.38	8.04	97.34	-	-	0.06	0.19	0.0033	0.0074	0.0047	<0.0154	-	-	-
MW-5	10/09/1987	105.38	7.21	98.17	-	-	0.16	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	01/16/1988	105.38	7.78	97.60	-	-	0.6	2.7	<0.001	**13**	**0.025**	0.054	-	-	-
MW-5	05/03/1988	105.38	6.03	99.35	-	-	1.3	5.8	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-
MW-5	07/26/1988	105.38	6.99	98.39	-	-	<0.5	-	<0.0002	0.0004	<0.0002	<0.0002	-	-	-
MW-5	11/17/1988	105.38	7.13	98.25	-	-	<0.4	-	<0.0002	0.0008	0.0003	0.0015	-	-	-
MW-5	03/13/1989	105.38	8.25	97.13	-	-	<0.6	-	<0.0002	0.0003	<0.0002	0.0006	-	-	-
MW-5	07/26/1989	105.38	6.24	99.14	-	-	<0.4	-	<0.0002	<0.002	<0.0002	<0.0006	-	-	-
MW-5	05/19/1990	-	-	-	-	-	0.8	-	<0.0002	<0.002	<0.0002	<0.0006	-	-	-
MW-5	10/02/1990	105.38	6.52	98.86	-	-	2.4	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	03/28/1991	105.38	8.12	97.26	-	-	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	04/19/1991	105.38	6.72	98.66	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/15/1991	105.38	6.81	98.57	-	-	-	-	-	-	-	-	-	-	-
MW-5	07/12/1991	105.38	8.12	97.26	-	-	-	-	-	-	-	-	-	-	-
MW-5	09/26/1991	105.38	10.47	94.91	<0.10	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	10/11/1991	105.38	10.71	94.67	-	-	-	-	-	-	-	-	-	-	-
MW-5	01/10/1992	108.59	11.38	97.21	-	-	-	-	-	-	-	-	-	-	-
MW-5	02/17/1992	108.59	11.66	96.93	<0.10	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	03/31/1992	108.59	11.11	97.48	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/19/1992	108.59	9.84	98.75	1.2	<0.1	1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-5	06/30/1992	108.59	10.22	98.37	-	-	-	-	-	-	-	-	-	-	-
MW-5	07/15/1992	108.59	10.45	98.14	-	-	-	-	-	-	-	-	-	-	-
MW-5	08/28/1992	108.59	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	10/04/2007	74.94	9.40	65.54	-	-	-	-	-	-	-	-	-	-	-
MW-5	06/19/2008	74.94	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	08/28/2008	76.35	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/19/2011	76.35	9.84	66.51	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/28/2012	76.35	9.33	67.02	-	-	-	-	-	-	-	-	-	-	-
MW-5	07/31/2012	76.35	9.96	66.39	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/08/2013	76.35	9.65	66.70	-	-	-	-	-	-	-	-	-	-	-
MW-5	09/17/2013	76.35	8.85	67.50	-	-	-	-	-	-	-	-	-	-	-
MW-5	06/07/2014	76.35	10.04	66.31	-	-	-	-	-	-	-	-	-	-	-
MW-5	11/04/2014	76.35	10.14	66.21	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-5	04/27/2015	76.35	10.43	65.92	-	-	-	-	-	-	-	-	-	-	-
MW-5	10/23/2015	76.35	9.09	67.26	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/17/2016	76.35	10.08	66.27	0.061 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-5	09/15/2016	76.35	9.83	66.52	-	-	-	-	-	-	-	-	-	-	-
MW-5	05/09/2017	76.35	9.53	66.82	-	-	-	-	-	-	-	-	-	-	-
MW-5	09/01/2017	76.35	9.31	67.04	-	-	-	-	-	-	-	-	-	-	-
MW-5	06/07/2018	76.35	9.89	66.46	-	-	-	-	-	-	-	-	<	-	-
MW-5	10/10/2018	76.35	9.99	66.36	-	-	-	-	-	-	-	-	<	-	-
MW-6	08/02/1986	101.56	5.54	96.02	-	-	-	-	-	-	-	-	-	-	-
MW-6	09/06/1986	101.56	-	-	-	-	-	-	**14**	**17**	**2.1**	**14**	-	-	-
MW-6	09/22/1986	101.56	5.68	95.88	-	-	-	-	-	-	-	-	-	-	-
MW-6	03/19/1987	101.56	7.27	94.29	-	-	12	24	**14.3**	**19**	**2.39**	**14.5**	-	-	-
MW-6	10/09/1987	101.56	6.01	95.55	-	-	11.3	-	**18.7**	**31.2**	**2.77**	**18.74**	-	-	-
MW-6	01/16/1988	101.56	6.75	94.81	-	-	6.6	9.4	**23.9**	**28.4**	**1.85**	**17.9**	-	-	-
MW-6	05/03/1988	101.56	4.46	97.10	-	-	6.8	7.6	**1.4**	**3.6**	**0.59**	**5.8**	-	-	-
MW-6	07/26/1988	101.56	5.60	95.96	-	-	10.1	-	**15**	**27**	**1.4**	**13**	-	-	-
MW-6	11/17/1988	101.56	5.99	95.57	-	-	6.9	-	**16**	**24**	**2.8**	**16**	ND	-	-
MW-6	03/13/1989	101.56	6.46	95.10	-	-	12.8	-	**8.5 / 10**	**7.3 / 8.7**	**0.56 / 0.76**	**5.9 / 4.4**	-	-	-
MW-6	07/26/1989	101.56	4.98	96.58	-	-	10.7	-	**17**	**23**	**10**	**14**	-	-	-
MW-6	10/09/1989	101.56	4.78	96.78	-	-	-	-	-	-	-	-	-	-	-
MW-6	09/27/1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-6A	10/09/1989	101.20	-	-	-	-	-	-	-	-	-	-	0.246	-	-
MW-6A	09/27/1990	101.20	9.74	91.46	-	-	-	-	-	-	-	-	-	-	-
MW-6A	10/02/1990	101.20	9.84	91.36	-	-	14.8	-	**0.706**	**1.13**	**0.11**	**0.975**	-	-	-
MW-6A	03/28/1991	101.20	9.89	91.31	-	-	-	-	-	-	-	-	-	-	-
MW-6A	05/15/1991	101.20	9.74	91.46	-	-	-	-	-	-	-	-	-	-	-
MW-6A	07/12/1991	101.20	10.38	90.82	-	-	-	-	-	-	-	-	-	-	-
MW-6A	09/26/1991	101.20	9.76	91.44	**2.7**	**30**	2.5	-	**8.7**	**8.4**	**0.9**	**0.975**	-	-	-
MW-6A	10/11/1991	101.20	9.75	91.45	-	-	-	-	-	-	-	-	-	-	-
MW-6A	01/10/1992	101.20	10.08	91.12	-	-	-	-	-	-	-	-	-	-	-
MW-6A	02/17/1992	101.20	11.14	90.06	0.36	**16**	1.4	-	**1.9**	0.24	<0.001	<0.001	-	-	-
MW-6A	03/31/1992	101.20	9.44	91.76	-	-	-	-	-	-	-	-	-	-	-
MW-6A	05/19/1992	101.20	7.82	93.38	**78**	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-6A	06/30/1992	101.20	9.58	91.62	-	-	-	-	-	-	-	-	-	-	-
MW-6A	07/15/1992	101.20	9.60	91.60	-	-	-	-	-	-	-	-	-	-	-
MW-6A	08/28/1992	101.20	9.64	91.56	-	-	-	-	**2.7**	**1.3**	**0.71**	**2.62**	-	-	-
MW-6A	10/13/1992	101.20	5.63	95.57	-	-	-	-	-	-	-	-	-	-	-
MW-6A	11/21/1992	101.20	9.23	91.97	-	-	-	-	**1.3 / 1.7**	0.30 / 0.31	**0.23 / 0.22**	**0.67 / 0.68**	-	-	-
MW-6A	12/17/1992	101.20	9.50	91.70	-	-	-	-	**1.6**	0.39	**0.58**	**2.1**	-	-	-
MW-6A	01/25/1993	101.20	9.85	91.35	-	-	-	-	-	-	-	-	-	-	-
MW-6A	02/10/1993	101.20	9.91	91.29	-	-	-	-	**1.1**	0.003	**0.35**	**0.55**	-	-	-
MW-6A	03/08/1993	101.20	9.91	91.29	-	-	-	-	-	-	-	-	-	-	-
MW-6A	03/16/1993	101.20	9.83	91.37	-	-	-	-	-	-	-	-	-	-	-
MW-6A	04/14/1993	101.20	9.37	91.83	-	-	-	-	-	-	-	-	-	-	-
MW-6A	05/05/1993	101.20	9.16	92.04	-	-	-	-	**1.3**	0.29	**0.39**	**0.99**	-	-	-
MW-6A	06/15/1993	101.20	8.09	93.11	-	-	-	-	-	-	-	-	-	-	-
MW-6A	07/19/1993	101.20	8.58	92.62	-	-	-	-	-	-	-	-	-	-	-
MW-6A	08/20/1993	101.20	11.28	89.92	-	-	-	-	**1.8**	<0.05	**0.40**	**0.70**	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-6A	03/20/1996	-	-	-	-	**5.100**	-	-	**1.100**	0.011	**0.091**	**0.350**	-	-	-
MW-6A	03/19/1997	-	-	-	-	0.960	-	-	**0.356**	<0.00250	<0.00250	<0.00500	-	-	-
MW-6A	12/10/1997	-	-	-	-	0.0988	-	-	**0.0450**	<0.000500	<0.000500	<0.00100	-	-	-
MW-6A	11/20/1998	-	-	-	-	0.115	-	-	**0.0397**	<0.000500	0.00338	0.0053	-	-	-
MW-6A	01/19/2000	68.76	7.49	61.27	-	**3.150**	-	-	**0.605**	0.00464	**0.104**	**0.400**	-	-	-
MW-7	08/02/1986	100.40	4.72	95.68	-	-	-	-	-	-	-	-	-	-	-
MW-7	09/06/1986	100.40	-	-	-	-	-	-	**2.4**	**4.9**	**0.39**	**5.6**	-	-	-
MW-7	09/22/1986	100.40	4.79	95.61	-	-	-	-	-	-	-	-	-	-	-
MW-7	03/19/1987	100.40	4.59	95.81	-	-	18	27	**6.03**	**12.3**	**2.66**	**13.9**	-	-	-
MW-7	10/09/1987	100.40	5.00	95.40	-	-	9.28	-	**8.4**	**19.8**	**2.07**	**18**	-	-	-
MW-7	01/16/1988	100.40	5.72	94.68	-	-	3.2	7.1	**8.2**	**3.9**	**2.4**	**17.5**	-	-	-
MW-7	05/03/1988	100.40	3.33	97.07	-	-	7.3	7.5	**6.3**	**17**	**1.1**	**9.9**	-	-	-
MW-7	07/26/1988	100.40	4.68	95.72	-	-	10.6	-	**6.4**	**15**	**1.5**	**11**	-	-	-
MW-7	11/17/1988	100.40	5.02	95.38	-	-	8	-	**7.8**	**12**	**2.7**	**14**	-	-	-
MW-7	03/13/1989	100.40	6.35	94.05	-	-	8.9	-	**8.1**	**8.5**	**0.63**	**4.2**	ND	-	-
MW-7	07/26/1989	100.40	3.38	97.02	-	-	10.8	-	**5**	**17**	**1.1**	**16**	0.123	-	-
MW-7	10/09/1989	100.40	3.76	96.64	-	-	-	-	-	-	-	-	-	-	-
MW-7	05/19/1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/06/1986	96.80	-	-	-	-	-	-	**0.2**	0.031	<0.001	**0.79**	-	-	-
MW-8	09/22/1986	96.80	6.31	90.49	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/19/1987	96.80	7.84	88.96	-	-	3.4	6.6	**1.34**	0.875	**1.04**	**4.64**	-	-	-
MW-8	10/09/1987	96.80	6.50	90.30	-	-	0.26	-	**0.116**	0.608	**0.0177**	**55.7**	-	-	-
MW-8	01/16/1988	96.80	7.28	89.52	-	-	0.57	4.5	**0.278**	0.394	**0.046**	**0.304**	-	-	-
MW-8	05/03/1988	96.80	5.40	91.40	-	-	1.5	6.8	<0.0002	<0.0002	<0.0002	0.0006	-	-	-
MW-8	07/26/1988	96.80	6.17	90.63	-	-	0.8	-	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-
MW-8	11/17/1988	96.80	6.57	90.23	-	-	0.6	-	**0.097**	0.0047	**0.065**	**0.27**	-	-	-
MW-8	03/13/1989	96.80	8.43	88.37	-	-	3.8	-	**1.4**	0.061	**0.97**	**4.9**	ND	-	-
MW-8	07/26/1989	96.80	5.86	90.94	-	-	1.6	-	**0.91**	0.0022	**0.28**	**1.5**	-	-	-
MW-8	10/09/1989	96.80	5.58	91.22	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/19/1990	96.80	-	-	-	-	2.1	-	<0.0002	<0.0002	<0.0002	<0.0002	0.024	-	-
MW-8	10/02/1990	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/28/1991	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/15/1991	96.80	10.45	86.35	-	-	-	-	-	-	-	-	-	-	-
MW-8	07/12/1991	96.80	10.20	86.60	-	-	-	-	-	-	-	-	-	-	-
MW-8	09/26/1991	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	02/17/1992	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/18/1992	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	06/30/1992	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/28/1992	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	10/13/1992	96.80	8.20	88.60	-	-	-	-	-	-	-	-	-	-	-
MW-8	11/21/1992	96.80	8.74	88.06	-	-	-	-	**2.0**	0.01	**0.18**	**0.82**	-	-	-
MW-8	12/17/1992	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	01/25/1993	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	02/10/1993	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/08/1993	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/16/1993	96.80	10.18	86.62	-	-	-	-	-	-	-	-	-	-	-
MW-8	04/14/1993	96.80	8.45	88.35	-	-	-	-	-	-	-	-	-	-	-
MW-8	05/05/1993	96.80	8.45	88.35	-	-	-	-	**0.47**	<0.005	**0.016**	0.02	-	-	-

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Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
	Units	ft msl	ft btoc	ft msl	DRO mg/L	GRO mg/L	TPH mg/L	Oil and Grease mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L	HVOCs mg/L	EDB mg/L	1,2-DCA mg/L
ADEC Groundwater Cleanup Levels					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-8	06/15/1993	96.80	8.98	87.82	-	-	-	-	-	-	-	-	-	-	-
MW-8	07/19/1993	96.80	9.36	87.44	-	-	-	-	-	-	-	-	-	-	-
MW-8	08/20/1993	96.80	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/20/1996	-	-	-	-	**6.500**	-	-	**1.200**	0.013	**0.036**	**1.400**	-	-	-
MW-8	03/19/1997	-	-	-	-	**2.820**	-	-	**0.618**	0.00545	**0.0276**	**0.547**	-	-	-
MW-8	12/10/1997	-	-	-	-	<0.0500	-	-	**0.00506**	<0.000500	0.000568	0.00405	-	-	-
MW-8	11/20/1998	-	-	-	-	<0.0500	-	-	**0.0123**	<0.000500	0.00156	0.00397	-	-	-
MW-8	01/19/2000	64.35	8.57	55.78	-	**10.100**	-	-	**0.535**	0.197	**0.748**	**4.090**	-	-	-
MW-9	09/06/1986	100.00	-	-	-	-	-	-	**3.3**	0.034	**0.15**	**0.56**	-	-	-
MW-9	09/22/1986	100.00	9.05	90.95	-	-	-	-	-	-	-	-	-	-	-
MW-9	03/19/1987	100.00	10.03	89.97	-	-	3.1	5.1	**4.71**	0.071	**0.073**	**2.896**	-	-	-
MW-9	10/09/1987	100.00	9.54	90.46	-	-	2.24	-	**5.43**	0.607	**0.0985**	**3.189**	-	-	-
MW-9	01/16/1988	100.00	9.60	90.40	-	-	0.44	0.96	**4.8**	0.583	**0.492**	**1.894**	-	-	-
MW-9	05/03/1988	100.00	8.02	91.98	-	-	4.9	5.9	**5.3**	0.062	<0.04	**0.96**	-	-	-
MW-9	07/26/1988	100.00	6.30	93.70	-	-	2.7	-	**6.7**	0.85	**0.22**	**2.6**	-	-	-
MW-9	11/17/1988	100.00	9.20	90.80	-	-	1.7	-	**6.2 / 4.4**	0.2 / 0.042	**0.63 / 0.52**	**1.8 / 1.3**	-	-	-
MW-9	03/13/1989	100.00	10.86	89.14	-	-	3.1	-	**8.4**	0.06	**0.52**	**2**	ND	-	-
MW-9	07/26/1989	100.00	8.77	91.23	-	-	3.7	-	**8.2**	0.21	<0.1	**0.96**	-	-	-
MW-9	10/09/1989	100.00	7.96	92.04	-	-	-	-	-	-	-	-	0.079	-	-
MW-9	05/19/1990	100.00	-	-	-	-	1.7	-	**4.09**	0.019	**0.16**	**0.822**	-	-	-
MW-9	08/30/1990	100.00	-	-	-	-	-	-	**2**	0.059	<0.04	**0.4**	-	-	-
MW-9	10/02/1990	100.00	9.70	90.30	-	-	3.8	-	**2.8**	0.02	**0.224**	**1.3**	-	-	-
MW-9	03/28/1991	100.00	11.64	88.36	-	-	13	-	**1.93**	0.008	**0.077**	**0.353**	-	-	-
MW-9	05/15/1991	100.00	9.65	90.35	-	-	-	-	-	-	-	-	-	-	-
MW-9	07/12/1991	100.00	9.89	90.11	-	-	-	-	-	-	-	-	-	-	-
MW-9	09/26/1991	100.00	10.06	89.94	<0.1	0.7	<1	-	**1.8**	0.006	**0.1**	0.1	-	-	-
MW-9	10/11/1991	100.00	10.19	89.81	-	-	-	-	-	-	-	-	-	-	-
MW-9	01/10/1992	100.00	10.78	89.22	-	-	-	-	-	-	-	-	-	-	-
MW-9	02/17/1992	100.00	11.16	88.84	<0.1	0.5	<1	-	**0.13**	<0.001	<0.001	0.013	-	-	-
MW-9	03/31/1992	100.00	10.97	89.03	-	-	-	-	-	-	-	-	-	-	-
MW-9	05/19/1992	100.00	9.36	90.64	**3.6**	<1	<1	-	**0.24**	<0.05	<0.05	<0.05	-	-	-
MW-9	06/30/1992	100.00	9.67	90.33	-	-	-	-	-	-	-	-	-	-	-
MW-9	07/15/1992	100.00	9.90	90.10	-	-	-	-	-	-	-	-	-	-	-
MW-9	08/28/1992	100.00	10.49	89.51	-	-	-	-	**0.91**	0.004	0.014	0.015	-	-	-
MW-9	10/13/1992	100.00	9.90	90.10	-	-	-	-	-	-	-	-	-	-	-
MW-9	11/21/1992	100.00	9.98	90.02	-	-	-	-	**1.1**	<0.001	**0.023**	0.022	-	-	-
MW-9	12/17/1992	100.00	10.08	89.92	-	-	-	-	**0.35**	<0.001	**0.02**	**0.68**	-	-	-
MW-9	01/25/1993	100.00	10.88	89.12	-	-	-	-	-	-	-	-	-	-	-
MW-9	02/10/1993	100.00	11.14	88.86	-	-	-	-	**0.59**	<0.001	0.013	0.012	-	-	-
MW-9	03/08/1993	100.00	11.53	88.47	-	-	-	-	-	-	-	-	-	-	-
MW-9	03/16/1993	100.00	11.52	88.48	-	-	-	-	-	-	-	-	-	-	-
MW-9	04/14/1993	100.00	10.57	89.43	-	-	-	-	-	-	-	-	-	-	-
MW-9	05/05/1993	100.00	9.80	90.20	-	-	-	-	**0.41**	<0.005	<0.005	<0.01	-	-	-
MW-9	06/15/1993	100.00	9.69	90.31	-	-	-	-	-	-	-	-	-	-	-
MW-9	07/19/1993	100.00	10.38	89.62	-	-	-	-	-	-	-	-	-	-	-
MW-9	08/20/1993	100.00	10.74	89.26	-	-	-	-	**0.78**	0.02	<0.01	0.03	-	-	-
MW-9	03/20/1996	-	-	-	-	0.900	-	-	**0.290**	<0.00050	0.0089	0.010	-	-	-
MW-9	03/19/1997	-	-	-	-	0.460	-	-	**0.165**	<0.00250	0.00332	<0.00500	-	-	-
MW-9	12/10/1997	-	-	-	-	<0.0500	-	-	**0.0176**	<0.000500	<0.000500	<0.00100	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-9	11/20/1998	-	-	-	-	0.121	-	-	**0.0640**	<0.000500	0.00139	0.00207	-	-	-
MW-9	01/19/2000	67.52	10.44	57.08	-	<0.0500	-	-	**0.0154**	<0.000500	<0.000500	<0.00100	-	-	-
MW-10	09/06/1986	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/22/1986	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	01/16/1987	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	03/19/1987	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	10/09/1987	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	05/03/1988	96.81	4.72	92.09	-	-	-	-	<0.0004	<0.0004	<0.0004	<0.0012	-	-	-
MW-10	07/26/1988	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	11/17/1988	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	03/13/1989	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	07/26/1989	96.81	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	10/09/1989	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	09/06/1986	103.04	-	-	-	-	-	-	**33**	**25**	**3.9**	**20**	-	-	-
MW-11	09/22/1986	103.04	6.04	97.00	-	-	-	-	-	-	-	-	-	-	-
MW-11	03/19/1987	103.04	6.01	97.03	-	-	-	-	-	-	-	-	-	-	-
MW-11	10/09/1987	103.04	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	01/16/1988	103.04	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	05/03/1988	103.04	6.23	96.81	-	-	-	-	-	-	-	-	-	-	-
MW-11	07/26/1988	103.04	5.96	97.08	-	-	-	-	-	-	-	-	-	-	-
MW-11	11/17/1988	103.04	5.93	97.11	-	-	-	-	-	-	-	-	-	-	-
MW-11	03/13/1989	103.04	5.79	97.25	-	-	97	-	**92**	**83**	**4.5**	**36**	-	-	-
MW-11	07/26/1989	103.04	5.93	97.11	-	-	-	-	-	-	-	-	-	-	-
MW-11	10/09/1989	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11A	09/27/1990	105.46	11.76	93.70	-	-	-	-	-	-	-	-	-	-	-
MW-11A	10/01/1990	105.46	12.42	93.04	-	-	-	-	-	-	-	-	-	-	-
MW-11A	10/09/1990	105.46	-	-	-	-	3.8	-	**2.08**	0.188	<0.001	0.09	-	-	-
MW-11A	03/28/1991	105.46	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11A	04/19/1991	105.46	11.10	94.36	-	-	-	-	-	-	-	-	-	-	-
MW-11A	05/15/1991	105.46	11.54	93.92	-	-	-	-	-	-	-	-	-	-	-
MW-11A	07/12/1991	105.46	11.28	94.18	-	-	-	-	-	-	-	-	-	-	-
MW-11A	09/26/1991	105.46	11.45	94.01	0.17	**10**	1.5	-	**6.4**	0.91	<0.001	**0.9**	-	-	-
MW-11A	10/11/1991	105.46	11.69	93.77	-	-	-	-	-	-	-	-	-	-	-
MW-11A	01/10/1992	104.90	12.04	92.86	-	-	-	-	-	-	-	-	-	-	-
MW-11A	02/17/1992	104.90	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11A	03/31/1992	104.90	11.75	93.15	-	-	-	-	-	-	-	-	-	-	-
MW-11A	05/19/1992	104.90	10.64	94.26	**11**	**7.4**	2.5	-	**2**	<0.05	**0.09**	**0.84**	-	-	-
MW-11A	06/30/1992	104.90	11.41	93.49	-	-	-	-	-	-	-	-	-	-	-
MW-11A	07/15/1992	104.90	11.53	93.37	-	-	-	-	-	-	-	-	-	-	-
MW-11A	08/28/1992	104.90	11.49	93.41	-	-	-	-	**3.5**	0.099	**0.5**	**1.84**	-	-	-
MW-11A	10/13/1992	104.90	9.29	95.61	-	-	-	-	-	-	-	-	-	-	-
MW-11A	11/21/1992	104.90	11.42	93.48	-	-	-	-	**2.5**	0.0036	**0.19**	**0.59**	-	-	-
MW-11A	12/17/1992	104.90	11.52	93.38	-	-	-	-	**4.1**	<0.05	**0.33**	**3**	-	-	-
MW-11A	01/25/1993	104.90	11.89	93.01	-	-	-	-	-	-	-	-	-	-	-
MW-11A	02/10/1993	104.90	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-11A	03/08/1993	104.90	11.95	92.95	-	-	-	-	-	-	-	-	-	-	-
MW-11A	03/16/1993	104.90	11.90	93.00	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-11A	04/14/1993	104.90	11.60	93.30	-	-	-	-	-	-	-	-	-	-	-
MW-11A	05/05/1993	104.90	11.59	93.31	-	-	-	-	-	-	-	-	-	-	-
MW-11A	06/15/1993	104.90	11.04	93.86	-	-	-	-	-	-	-	-	-	-	-
MW-11A	07/19/1993	104.90	11.20	93.70	-	-	-	-	-	-	-	-	-	-	-
MW-11A	08/20/1993	104.90	9.41	95.49	-	-	-	-	**4.7**	<0.10	**1.1**	**3.9**	-	-	-
MW-11A	03/29/2005	71.09	-	-	<0.42	**3.21**	-	-	**0.254**	0.00201	0.0131	**0.834**	-	-	-
MW-11A	12/31/2005	71.09	-	-	0.567	**4.47**	-	-	**0.236**	<0.005	0.00985	**0.981**	-	-	-
MW-11A	06/30/2006	71.09	-	-	<0.39	**3.71**	-	-	**0.194**	<0.005	**0.015**	**0.906**	-	-	-
MW-11A	09/18/2006	71.09	-	-	0.79	**4.90**	-	-	**0.240**	0.0013	0.014	**1.1**	-	-	-
MW-11A	06/29/2007	71.09	-	-	**2.20**	**3.10**	-	-	**0.200**	0.0010	0.010	**0.60**	-	-	-
MW-11A	10/04/2007	71.09	8.54	62.55	0.28	-	-	-	**0.22**	0.002	**0.020**	**1.1**	-	<0.0000095	**0.006**
MW-11A	06/19/2008	71.09	9.63	61.46	0.28	**4.9**	-	-	**0.20**	0.002	**0.03**	**0.7**	-	-	-
MW-11A	08/28/2008	73.45	10.72	62.73	0.37	**4.2**	-	-	**0.20**	0.001	0.01	**0.7**	-	-	-
MW-11A	05/14/2009	73.45	9.24	64.21	0.44	**3.5**	-	-	**0.18**	0.0012	**0.018**	**0.68**	-	-	-
MW-11A	08/27/2009	73.45	9.02	64.43	0.45	**5.2**	-	-	**0.22**	0.0019 J	**0.021**	**1.2**	-	-	-
MW-11A	06/08/2010	73.45	9.64	63.81	0.36	**3.4**	-	-	**0.15**	0.0009 J	0.011	**0.62**	-	-	-
MW-11A	08/06/2010	73.45	8.55	64.90	0.37	2.1	-	-	**0.071**	<0.0025	0.0047 J	**0.59**	-	-	-
MW-11A	05/19/2011	73.45	9.17	64.28	0.51	**2.6**	-	-	**0.14**	0.0008 J	0.011	**0.53**	-	-	-
MW-11A	08/01/2011	73.45	9.99	63.46	0.42	**2.9**	-	-	**0.10**	0.0005 J	0.0089	**0.62**	-	-	-
MW-11A	05/28/2012	73.45	9.30	64.15	-	-	-	-	-	-	-	-	-	-	-
MW-11A	05/31/2012	-	-	-	0.51	**3.4**	-	-	**0.11**	0.0008 J	0.0094	**0.67**	-	-	-
MW-11A	07/31/2012	73.45	9.49	63.96	0.38	**3.6 J**	-	-	**0.12**	0.0007 J	0.0099	**0.74**	-	-	-
MW-11A	05/08/2013	73.45	8.43	65.02	0.54 J	**4.5**	-	-	**0.14 J**	0.0015 J	**0.019 J**	**0.95 J**	-	-	-
MW-11A[HS]	05/08/2013	73.45	8.43	65.02	0.43 J	2.2	-	-	**0.13**	0.00097 J	0.010	**0.47**	-	-	-
MW-11A	09/17/2013	73.45	8.35	65.10	-	-	-	-	-	-	-	-	-	-	-
MW-11A	09/18/2013	-	-	-	-	-	-	-	**0.11 J** / 0.0039 J	0.00097 J / <0.00023	0.0053 J / 0.0016 J	**0.45 J /** 0.0018 J	-	-	-
MW-11A	06/07/2014	73.45	9.48	63.97	-	-	-	-	-	-	-	-	-	-	-
MW-11A	06/11/2014	-	-	-	0.46	**4.1**	-	-	**0.13**	0.00084 J	0.014	**1.0 J**	-	-	-
MW-11A[HS]	06/11/2014	-	-	-	0.51	**4.0**	-	-	**0.12**	0.0017 J	0.011	**0.90**	-	-	-
MW-11A	11/04/2014	73.45	9.48	63.97	0.50	**4.9 J**	-	-	**0.12**	0.00076 J	0.014	**1.3**	-	-	
MW-11A	04/27/2015	73.45	9.37	64.08	0.48	**3.1**	-	-	**0.086**	0.0006 J	0.0095	**0.55**	-	-	-
MW-11A	10/23/2015	73.45	8.40	65.05	0.43	**2.3**	-	-	**0.071**	<0.005	0.006 J	**0.58**	-	-	-
MW-11A	05/17/2016	73.45	9.26	64.19	0.29	**3.8**	-	-	**0.094**	0.0007 J	0.011	**0.81**	-	-	-
MW-11A	09/15/2016	73.45	8.56	64.89	0.42	2.2	-	-	**0.059**	<0.0005	0.005	**0.37**	-	-	-
MW-11A	05/09/2017	73.45	8.64	64.81	0.18 J	**2.8**	-	-	**0.071**	<0.0005	0.009	**0.49**	-	-	-
MW-11A	09/01/2017	73.45	8.54	64.91	0.24 J	**2.8**	-	-	**0.062**	<0.001	0.007	**0.55**	-	-	-
MW-11A	06/07/2018	73.45	9.39	64.06	0.21 J	**4.2**	-	-	**0.086**	0.0008 J	0.014	**0.76**	-	<0.0005	**0.006**
MW-11A	10/10/2018	73.45	9.44	64.01	0.43	**3.9**	-	-	**0.076**	0.0006 J	0.012	**1.2**	-	<0.0003	**0.006**
MW-12	11/17/1988	107.89	9.88	98.01	-	-	0.5	-	0.0019	0.0061	0.0023	0.012	-	-	-
MW-12	03/13/1989	107.89	10.53	97.36	-	-	0.6	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-12	07/26/1989	107.89	9.76	98.13	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-12	05/19/1990	107.89	-	-	-	-	0.5	-	0.0003	<0.0002	<0.0002	0.007	-	-	-
MW-12	10/02/1990	107.89	9.65	98.24	-	-	2.4	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-12	03/28/1991	107.89	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	05/15/1991	107.89	8.89	99.00	-	-	-	-	-	-	-	-	-	-	-
MW-12	07/12/1991	107.89	9.43	98.46	-	-	-	-	-	-	-	-	-	-	-
MW-12	09/26/1991	107.89	9.55	98.34	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-12	10/11/1991	107.89	10.36	97.53	-	-	-	-	-	-	-	-	-	-	-
MW-12	01/10/1992	107.89	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-12	02/17/1992	107.89	9.80	98.09	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-12	05/19/1992	107.89	9.00	98.89	**5.5**	<0.1	<1	-	0.002	<0.001	<0.001	<0.001	-	-	-
MW-12	06/30/1992	107.89	9.66	98.23	-	-	-	-	-	-	-	-	-	-	-
MW-12	07/15/1992	107.89	9.75	98.14	-	-	-	-	-	-	-	-	-	-	-
MW-12	08/28/1992	107.89	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	03/13/1988	101.86	10.33	91.53	-	-	1.1	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-13	07/26/1988	101.86	7.66	94.20	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-13	11/17/1988	101.86	8.68	93.18	-	-	<0.4	-	0.0003	0.0009	0.0013	0.0049	-	-	-
MW-13	05/19/1990	101.86	-	-	-	-	0.4	-	0.0009	<0.0002	<0.0002	0.007	-	-	-
MW-13	10/02/1990	101.86	7.66	94.20	-	-	2.6	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-13	01/10/1991	101.86	9.04	92.82	-	-	-	-	-	-	-	-	-	-	-
MW-13	03/29/1991	101.86	7.66	94.20	-	-	<1	-	0.001	<0.001	<0.001	<0.001	-	-	-
MW-13	05/15/1991	101.86	7.68	94.18	-	-	-	-	-	-	-	-	-	-	-
MW-13	07/12/1991	101.86	7.41	94.45	-	-	-	-	-	-	-	-	-	-	-
MW-13	09/26/1991	101.86	7.87	93.99	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-13	10/11/1991	101.86	8.17	93.69	-	-	-	-	-	-	-	-	-	-	-
MW-13	02/17/1992	101.86	9.30	92.56	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-13	03/31/1992	101.86	8.97	92.89	-	-	-	-	-	-	-	-	-	-	-
MW-13	05/19/1992	101.86	7.22	94.64	**2.2**	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-13	06/30/1992	101.86	7.81	94.05	-	-	-	-	-	-	-	-	-	-	-
MW-13	07/15/1992	101.86	7.95	93.91	-	-	-	-	-	-	-	-	-	-	-
MW-13	08/28/1992	101.86	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-14	03/13/1988	88.32	7.78	80.54	-	-	0.77	-	<0.0002	<0.0002	<0.0002	<0.0006	ND	-	-
MW-14	07/26/1988	88.32	8.60	79.72	-	-	0.5	-	0.0003	<0.0002	<0.0002	<0.0006	-	-	-
MW-14	05/19/1990	88.32	-	-	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-14	10/02/1990	88.32	5.27	83.05	-	-	2.6	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-14	01/10/1991	88.32	7.47	80.85	-	-	-	-	-	-	-	-	-	-	-
MW-14	03/29/1991	88.32	8.24	80.08	-	-	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-14	05/15/1991	88.32	5.83	82.49	-	-	-	-	-	-	-	-	-	-	-
MW-14	07/12/1991	88.32	8.80	79.52	-	-	-	-	-	-	-	-	-	-	-
MW-14	09/26/1991	88.32	9.75	78.57	<0.1	<0.1	1.1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-14	10/11/1991	88.32	9.62	78.70	-	-	-	-	-	-	-	-	-	-	-
MW-14	02/17/1992	88.32	7.40	80.92	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-14	03/31/1992	88.32	6.94	81.38	-	-	-	-	-	-	-	-	-	-	-
MW-14	05/19/1992	88.32	6.20	82.12	**4.8**	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-14	06/30/1992	88.32	8.50	79.82	-	-	-	-	-	-	-	-	-	-	-
MW-14	07/15/1992	88.32	9.00	79.32	-	-	-	-	-	-	-	-	-	-	-
MW-14	08/28/1992	88.32	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-14	12/10/1997	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-14	11/20/1998	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-14	01/19/2000	53.79	7.70	46.09	-	<0.0500 / <0.0500	-	-	<0.000500 / <0.000500	0.00230 / 0.00176	<0.000500 / <0.000500	<0.00100 / <0.00100	-	-	-
MW-15	03/13/1988	84.65	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	07/26/1988	84.65	8.46	76.19	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-15	05/19/1990	84.65	-	-	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-15	10/02/1990	84.65	4.06	80.59	-	-	1.8	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-15	01/10/1991	84.65	7.77	76.88	-	-	-	-	-	-	-	-	-	-	-
MW-15	03/29/1991	84.65	7.80	76.85	-	-	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-15	05/15/1991	84.65	5.34	79.31	-	-	-	-	-	-	-	-	-	-	-
MW-15	07/12/1991	84.65	8.66	75.99	-	-	-	-	-	-	-	-	-	-	-
MW-15	09/26/1991	84.65	9.77	74.88	<0.1	<0.1	2	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-15	10/11/1991	84.65	10.64	74.01	-	-	-	-	-	-	-	-	-	-	-
MW-15	02/17/1992	84.65	7.46	77.19	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-15	03/31/1992	84.65	6.78	77.87	-	-	-	-	-	-	-	-	-	-	-
MW-15	05/19/1992	84.65	5.66	78.99	**2**	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-15	06/30/1992	84.65	7.97	76.68	-	-	-	-	-	-	-	-	-	-	-
MW-15	07/15/1992	84.65	8.50	76.15	-	-	-	-	-	-	-	-	-	-	-
MW-15	08/28/1992	84.65	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	12/10/1997	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-15	11/20/1998	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-15	01/19/2000	50.78	7.18	43.60	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-16	03/13/1988	90.13	13.88	76.25	-	-	0.8	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-16	07/26/1988	90.13	13.50	76.63	-	-	<0.4	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-16	05/19/1990	90.13	-	-	-	-	0.5	-	<0.0002	<0.0002	<0.0002	<0.0006	-	-	-
MW-16	10/02/1990	90.13	12.82	77.31	-	-	2.4	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-16	01/10/1991	90.13	13.89	76.24	-	-	-	-	-	-	-	-	-	-	-
MW-16	03/29/1991	90.13	13.55	76.58	-	-	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-16	05/15/1991	90.13	13.32	76.81	-	-	-	-	-	-	-	-	-	-	-
MW-16	07/12/1991	90.13	13.36	76.77	-	-	-	-	-	-	-	-	-	-	-
MW-16	09/26/1991	90.13	13.64	76.49	<0.1	<0.1	1.7	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-16	10/11/1991	90.13	13.66	76.47	-	-	-	-	-	-	-	-	-	-	-
MW-16	02/17/1992	90.13	13.85	76.28	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-16	03/31/1992	90.13	13.15	76.98	-	-	-	-	-	-	-	-	-	-	-
MW-16	05/19/1992	90.13	13.26	76.87	**5.2**	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-16	06/30/1992	90.13	13.45	76.68	-	-	-	-	-	-	-	-	-	-	-
MW-16	07/15/1992	90.13	13.60	76.53	-	-	-	-	-	-	-	-	-	-	-
MW-16	08/28/1992	90.13	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	12/10/1997	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-16	11/20/1998	-	-	-	-	<0.0500	-	-	<0.000500	<0.000500	<0.000500	<0.00100	-	-	-
MW-16	01/19/2000	55.07	14.11	40.96	-	<0.0500	-	-	<0.000500	0.000601	<0.000500	<0.00100	-	-	-
MW-17	09/27/1990	96.67	11.21	85.46	-	-	-	-	-	-	-	-	-	-	-
MW-17	10/02/1990	96.67	11.20	85.47	-	-	1.8	-	<0.001	<0.001	<0.001	<0.001	ND	-	-
MW-17	03/28/1991	96.67	-	-	-	-	-	-	-	-	-	-	-	-	-
MW-17	05/15/1991	96.67	10.95	85.72	-	-	-	-	-	-	-	-	-	-	-
MW-17	07/12/1991	96.67	11.72	84.95	-	-	-	-	-	-	-	-	-	-	-
MW-17	09/26/1991	96.67	9.71	86.96	<0.1	0.4	2	-	**0.15**	<0.001	0.006	0.014	-	-	-
MW-17	10/11/1991	96.67	10.07	86.60	-	-	-	-	-	-	-	-	-	-	-
MW-17	01/10/1992	96.67	9.48	87.19	-	-	-	-	-	-	-	-	-	-	-
MW-17	02/17/1992	96.67	9.56	87.11	<0.1	<0.1	<1	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-17	03/31/1992	96.67	9.08	87.59	-	-	-	-	-	-	-	-	-	-	-
MW-17	05/19/1992	96.67	9.00	87.67	**83**	<0.1	<1	-	**0.081**	<0.001	<0.001	<0.001	-	-	-
MW-17	06/30/1992	96.67	11.78	84.89	-	-	-	-	-	-	-	-	-	-	-
MW-17	07/15/1992	96.67	12.15	84.52	-	-	-	-	-	-	-	-	-	-	-
MW-17	08/28/1992	96.67	12.10	84.57	-	-	-	-	**0.066**	0.003	<0.001	<0.001	-	-	-
MW-17	10/13/1992	96.67	9.59	87.08	-	-	-	-	-	-	-	-	-	-	-
MW-17	11/21/1992	96.67	8.74	87.93	-	-	-	-	**0.027**	<0.001	<0.001	<0.001	-	-	-

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Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-17	12/17/1992	96.67	10.35	86.32	-	-	-	-	<0.001	<0.001	<0.001	<0.001	-	-	-
MW-17	01/25/1993	96.67	11.99	84.68	-	-	-	-	-	-	-	-	-	-	-
MW-17	02/10/1993	96.67	9.95	86.72	-	-	-	-	**0.048**	<0.001	<0.001	<0.002	-	-	-
MW-17	03/08/1993	96.67	11.50	85.17	-	-	-	-	-	-	-	-	-	-	-
MW-17	03/16/1993	96.67	11.04	85.63	-	-	-	-	-	-	-	-	-	-	-
MW-17	04/14/1993	96.67	9.53	87.14	-	-	-	-	-	-	-	-	-	-	-
MW-17	05/05/1993	96.67	8.86	87.81	-	-	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-17	06/15/1993	96.67	9.81	86.86	-	-	-	-	-	-	-	-	-	-	-
MW-17	07/19/1993	96.67	10.30	86.37	-	-	-	-	-	-	-	-	-	-	-
MW-17	08/20/1993	96.67	12.28	84.39	-	-	-	-	-	-	-	-	-	-	-
MW-17	03/20/1996	-	-	-	-	0.440 / 0.460	-	-	**0.110 / 0.110**	<0.00050 / <0.00050	0.014 / 0.013	0.0035 / 0.0034	-	-	-
MW-17	03/19/1997	-	-	-	-	0.544 / 0.559	-	-	**0.144 / 0.154**	<0.00250 / <0.00250	**0.0250 / 0.0258**	<0.00500 / 0.0051	-	-	-
MW-17	12/10/1997	-	-	-	-	0.443	-	-	**0.0992**	0.000669	**0.0203**	0.00171	-	-	-
MW-17	11/20/1998	-	-	-	-	0.485	-	-	**0.167**	0.00114	**0.0295**	0.00065	-	-	-
MW-17	01/19/2000	61.99	9.56	52.43	-	0.393	-	-	**0.132**	0.00112	0.0102	0.00273	-	-	-
MW-18	09/27/1990	97.12	8.79	88.33	-	-	-	-	-	-	-	-	-	-	-
MW-18	10/02/1990	97.12	8.78	88.34	-	-	3.8	-	**3.21**	0.004	0.003	0.005	-	-	-
MW-18	03/28/1991	97.12	10.22	86.90	-	-	-	-	-	-	-	-	-	-	-
MW-18	05/15/1991	97.12	7.77	89.35	-	-	-	-	-	-	-	-	-	-	-
MW-18	07/12/1991	97.12	9.41	87.71	-	-	-	-	-	-	-	-	-	-	-
MW-18	09/26/1991	97.12	9.83	87.29	<0.1	<0.1	1.7	-	**0.16**	<0.001	<0.001	0.0021	-	-	-
MW-18	10/11/1991	97.12	9.78	87.34	-	-	-	-	-	-	-	-	-	-	-
MW-18	01/10/1992	97.12	9.72	87.40	-	-	-	-	-	-	-	-	-	-	-
MW-18	02/17/1992	97.12	10.04	87.08	<0.1	**107**	<1	-	**4.1**	0.012	<0.001	<0.001	-	-	-
MW-18	03/31/1992	97.12	9.19	87.93	-	-	-	-	-	-	-	-	-	-	-
MW-18	05/19/1992	97.12	8.16	88.96	**5.1**	1.7	<1	-	**0.83**	<0.05	<0.05	<0.05	-	-	-
MW-18	06/30/1992	97.12	9.11	88.01	-	-	-	-	-	-	-	-	-	-	-
MW-18	07/15/1992	97.12	9.60	87.52	-	-	-	-	-	-	-	-	-	-	-
MW-18	08/28/1992	97.12	10.98	86.14	-	-	-	-	-	-	-	-	-	-	-
MW-18	10/13/1992	97.12	9.81	87.31	-	-	-	-	-	-	-	-	-	-	-
MW-18	11/21/1992	97.12	9.13	87.99	-	-	-	-	**3.7**	0.0038	0.0019	0.0016	-	-	-
MW-18	12/17/1992	97.12	8.70	88.42	-	-	-	-	**3.2 / 2.7**	<0.01 / 0.01	<0.01 / <0.01	<0.01 / <0.01	-	-	-
MW-18	01/25/1993	97.12	9.69	87.43	-	-	-	-	-	-	-	-	-	-	-
MW-18	02/10/1993	97.12	12.20	84.92	-	-	-	-	**2.6**	0.004	0.003	<0.002	-	-	-
MW-18	03/08/1993	97.12	10.36	86.76	-	-	-	-	-	-	-	-	-	-	-
MW-18	03/16/1993	97.12	10.38	86.74	-	-	-	-	-	-	-	-	-	-	-
MW-18	04/14/1993	97.12	7.45	89.67	-	-	-	-	-	-	-	-	-	-	-
MW-18	05/05/1993	97.12	7.69	89.43	-	-	-	-	**1.6**	<0.01	<0.01	<0.02	-	-	-
MW-18	06/15/1993	97.12	9.09	88.03	-	-	-	-	-	-	-	-	-	-	-
MW-18	07/19/1993	97.12	10.82	86.30	-	-	-	-	-	-	-	-	-	-	-
MW-18	08/20/1993	97.12	11.28	85.84	-	-	-	-	-	-	-	-	-	-	-
MW-18	03/19/1997	-	-	-	-	**2.370**	-	-	**0.892**	<0.00500	<0.00500	<0.0100	-	-	-
MW-18	12/10/1997	-	-	-	-	0.882 / 0.406	-	-	**0.356 / 0.162**	<0.000500 / <0.000500	<0.000500 / <0.000500	<0.00100 / <0.00100	-	-	-
MW-18	11/20/1998	-	-	-	-	0.601	-	-	**1.950**	<0.000500	<0.000500	<0.00100	-	-	-
MW-18	01/19/2000	62.51	9.38	53.13	-	**2.330**	-	-	**1.350**	<0.000500	<0.000500	<0.00100	-	-	-
MW-19	03/29/2005	73.64	-	-	<0.40	2.01	-	-	**0.0143**	0.0008	**0.135**	**0.286**	-	-	-
MW-19	12/31/2005	73.64	-	-	<0.39	<0.05	-	-	<0.005	<0.005	0.00059	<0.015	-	-	-
MW-19	06/30/2006	73.64	-	-	<0.40	0.266	-	-	0.00356	<0.005	**0.031**	0.0564	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-19	09/18/2006	73.64	-	-	1.0	**4.6**	-	-	**0.027**	0.0009	**0.27**	**0.80**	-	-	-
MW-19	06/29/2007	73.64	-	-	0.35	0.20	-	-	0.002	<0.001	**0.02**	0.03	-	-	-
MW-19	10/04/2007	73.64	9.82	63.82	0.66 / 0.71	**2.6 / 2.6**	-	-	**0.02 / 0.02**	<0.001 / <0.001	**0.2 / 0.2**	**0.5 /** <0.5	-	-	-
MW-19	06/19/2008	73.64	10.58	63.06	0.60	**3.3**	-	-	<0.002	0.001	**0.2**	**0.4**	-	-	-
MW-19	08/28/2008	75.65	10.68	64.97	0.69	2.0	-	-	**0.02**	<0.001	**0.1**	**0.3**	-	-	-
MW-19	05/14/2009	75.65	10.54	65.11	0.51	1.5	-	-	**0.020**	<0.0005	**0.11**	**0.25**	-	-	-
MW-19	08/27/2009	75.65	10.41	65.24	0.56	2.2	-	-	**0.024**	0.0005 J	**0.14**	**0.42**	-	-	-
MW-19	06/08/2010	75.65	10.60	65.05	0.11 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-19	08/06/2010	75.65	10.23	65.42	0.44	0.97	-	-	**0.013**	<0.0005	**0.060**	0.13	-	-	-
MW-19	05/19/2011	75.65	10.44	65.21	0.19 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-19	08/01/2011	75.65	10.81	64.84	0.052 J	0.043 J	-	-	0.0015 J	<0.0005	<0.0005	0.0048 J	-	-	-
MW-19	05/28/2012	75.65	10.31	65.34	-	-	-	-	-	-	-	-	-	-	-
MW-19	05/31/2012	-	-	-	0.33	0.95	-	-	**0.012**	0.0007 J	**0.037**	0.12	-	-	-
MW-19	07/31/2012	75.65	10.55	65.10	0.30	0.52	-	-	**0.0094**	0.0005 J	**0.018**	0.058	-	-	-
MW-19	05/08/2013	75.65	10.22	65.43	0.37 J	0.88	-	-	**0.0093**	<0.000077	**0.025**	0.13	-	-	-
MW-19[HS]	05/08/2013	75.65	10.22	65.43	0.83	0.28 J	-	-	0.0027	<0.000077	0.0052	0.031	-	-	-
MW-19	09/17/2013	75.65	9.72	65.93	-	-	-	-	-	-	-	-	-	-	-
MW-19	09/18/2013	-	-	-	1.3	<0.050	-	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-
MW-19	06/07/2014	75.65	10.51	65.14	-	-	-	-	-	-	-	-	-	-	-
MW-19	06/11/2014	-	-	-	0.18 J	0.13	-	-	0.0014	<0.00011	0.0013	0.014	-	-	-
MW-19[HS]	06/11/2014	-	-	-	0.50	<0.050	-	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-
MW-19	11/04/2014	75.65	10.57	65.08	0.13 J	<0.050	-	-	0.00044 J	<0.00011	0.00019 J	<0.00040	-	-	
MW-19	04/27/2015	75.65	10.87	64.78	0.096 J	0.11	-	-	0.0017 J	<0.0005	<0.0005	<0.0015	-	-	-
MW-19	10/23/2015	75.65	9.84	65.81	0.077 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-19	05/17/2016	75.65	10.52	65.13	0.056 J	0.03 J	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-19	09/15/2016	75.65	10.32	65.33	0.081 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-19	05/09/2017	75.65	10.31	65.34	0.069 J	0.014 J	-	-	<0.0005	<0.0005	<0.0005	0.002	-	-	-
MW-19	09/01/2017	75.65	10.04	65.61	0.12 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-19	06/07/2018	75.65	10.53	65.12	<0.052	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005
MW-19	10/10/2018	75.65	10.49	65.16	<0.12 J	<0.014	-	-	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0003	<0.002
MW-20	03/29/2005	71.21	-	-	**8.90 / 8.63**	**46.2 / 45.9**	-	-	**0.657 / 0.665**	**3.67 / 3.72**	**1.78 / 1.77**	**11.4 / 11.5**	-	-	-
MW-20	12/31/2005	71.21	-	-	**10.1 / 11.0**	**60.1 / 58.6**	-	-	**0.844 / 0.821**	**5.73 / 5.88**	**1.78 / 1.81**	**12.6 / 12.9**	-	-	-
MW-20	06/30/2006	71.21	-	-	**10.9 / 10.7**	**57.9 / 58.5**	-	-	**0.800 / 0.788**	**6.08 / 6.04**	**2.09 / 2.08**	**14.1 / 14.1**	-	-	-
MW-20	09/18/2006	71.21	-	-	**5.6 / 5.3**	**23 / 23**	-	-	**0.35 / 0.35**	0.73 / 0.75	**0.94 / 0.92**	**6.0 / 5.9**	-	-	-
MW-20	06/29/2007	71.21	-	-	**8.0 / 7.5**	**41 / 43**	-	-	**0.50 / 0.50**	**3.5 / 3.7**	**1.4 / 1.4**	**9.7 / 9.4**	-	-	-
MW-20	10/04/2007	71.21	8.94	62.27	**5.30**	**29**	-	-	**0.3**	**1.2**	**1.2**	**7.0**	-	-	-
MW-20	06/19/2008	71.21	9.88	61.33	**4.6 / 4.3**	**21 / 19**	-	-	**0.3 / 0.2**	0.6 / 0.5	**0.7 / 0.7**	**3.9 / 4.2**	-	-	-
MW-20	08/28/2008	-	-	-	**4.2**	**24**	-	-	**0.3**	1.0	**0.9**	**5.3**	-	-	-
MW-20	08/29/2008	73.73	9.98	63.75	**4.5**	**26**	-	-	**0.3**	1.1	**0.9**	**4.7**	-	-	-
MW-20	05/14/2009	73.73	9.59	64.14	**5.4 J / 3.9 J**	**35 / 38**	-	-	**0.40 / 0.37**	**1.6 / 1.5**	**1.4 / 1.5**	**8.9 / 9.2**	-	-	-
MW-20	08/27/2009	73.73	9.30	64.43	**2.3 J / 2.6**	**17 / 18**	-	-	**0.19 / 0.19**	0.48 / 0.47	**0.79 / 0.83**	**5.3 / 5.6**	-	-	-
MW-20	06/08/2010	73.73	9.91	63.82	**6.2 / 6.1**	**29 / 28**	-	-	**0.24 / 0.24**	**1.7 / 1.7**	**1.0 / 1.0**	**6.4 / 6.2**	-	-	-
MW-20	08/06/2010	73.73	10.04	63.69	**6.6 / 5.9**	**39 / 32**	-	-	**0.28 / 0.24**	**2.9 / 2.3**	**1.5 / 1.2**	**9.5 / 8.0**	-	-	-
MW-20	05/19/2011	73.73	9.58	64.15	**6.0 / 5.9**	**34 / 31**	-	-	**0.41 / 0.39**	**2.6 / 2.6**	**1.4 / 1.3**	**8.1 / 8.0**	-	-	-
MW-20	08/01/2011	73.73	10.23	63.50	**4.5 / 5.3**	**40 / 35**	-	-	**0.42 / 0.35**	**2.9 / 2.4**	**1.6 / 1.4**	**9.1 / 8.1**	-	-	-
MW-20	05/28/2012	73.73	9.49	64.24	-	-	-	-	-	-	-	-	-	-	-
MW-20	05/31/2012	-	-	-	**2.8 J / 4.7 J**	**33 / 30**	-	-	**0.27 / 0.27**	**1.4 / 1.3**	**1.2 / 1.1**	**8.0 / 7.2**	-	-	-
MW-20	07/31/2012	73.73	9.80	63.93	**9.8 / 11**	**31 / 36**	-	-	**0.35 / 0.27**	**2.4 J / 1.3 J**	**1.6 / 1.1**	**11 J / 6.3 J**	-	-	-
MW-20	05/08/2013	73.73	8.92	64.81	-	-	-	-	-	-	-	-	-	-	-

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	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-20	05/09/2013	-	-	-	**6.7 / 7.5**	**57.6 / 55.8 J**	-	-	**0.40 / 0.39**	**2.5 / 2.7**	**1.8 / 1.7**	**12.1 / 12.7**	-	-	-
MW-20[HS]	05/09/2013	-	-	-	**4.9 / 4.7**	**34.7 / 39.1**	-	-	**0.20 / 0.27**	**1.3 / 1.7**	**0.92 / 1.1**	**6.4 / 7.5**	-	-	-
MW-20	09/17/2013	73.73	8.83	64.90	-	-	-	-	-	-	-	-	-	-	-
MW-20	09/18/2013	-	-	-	**5.9**	**45.6**	-	-	**0.33 / 0.33**	**1.9 / 2.0**	**1.4 / 1.4**	**10 / 8.6**	-	-	-
MW-20	06/07/2014	73.73	9.78	63.95	-	-	-	-	-	-	-	-	-	-	-
MW-20	06/11/2014	-	-	-	**8.2 / 8.1**	**46.1 / 48.5**	-	-	**0.48 / 0.35**	**2.7 / 2.0**	**2.5 / 1.9**	**17.1 / 12.5 J**	-	-	-
MW-20[HS]	06/11/2014	-	-	-	**9.0 / 8.3**	**54.3 / 60.1**	-	-	**0.52 / 0.41**	**4.8 / 3.5 J**	**2.9 / 2.1**	**19.3 / 12.5 J**	-	-	-
MW-20	11/04/2014	73.73	9.77	63.96	**9.3 / 9.5**	**51.6 J / 62.9 J**	-	-	**0.31 / 0.30**	**2.1 / 2.1**	**2.0 / 2.0**	**15.6 / 15.4**	-	-	
MW-20	04/27/2015	73.73	10.18	63.55	**7.3 / 7.3**	**60 / 62**	-	-	**0.32 / 0.31**	**3.2 / 3.4**	**2.2 / 2.4**	**15 / 16**	-	-	-
MW-20	10/23/2015	73.73	8.85	64.88	**2.1 / 2.1**	**3.4 / 3.8**	-	-	**0.031 / 0.034**	0.020 / 0.021	**0.11 / 0.11**	**0.83 / 0.88**	-	-	-
MW-20	05/17/2016	73.73	9.62	64.11	**10 / 9.5**	**41 / 41**	-	-	**0.23 / 0.24**	**1.7 / 1.7**	**1.4 / 1.5**	**9.8 / 10**	-	-	-
MW-20	09/15/2016	73.73	8.98	64.75	**5.8 / 7.3**	**17 / 15**	-	-	**0.15 / 0.13**	0.41 / 0.35	**0.68 / 0.56**	**4.4 / 3.7**	-	-	-
MW-20	05/09/2017	73.73	9.11	64.62	**6.0 J / 6.6**	**32 / 29**	-	-	**0.17 J / 0.081 J**	**1.2 J** / <0.01 J	**1.3 J / 0.04 J**	**8.8 J / 4.9 J**	-	-	-
MW-20	09/01/2017	73.73	8.99	64.74	0.65 J / **2.9 J**	**13 / 9.6**	-	-	**0.10 / 0.11**	0.47 / 0.49	**0.55 / 0.54**	**3.1 / 3.3**	-	-	-
MW-20	06/07/2018	73.73	9.71	64.02	**4.7 / 4.4**	**46 / 38**	-	-	**0.18 / 0.15**	**1.3** / 0.95	**1.5 / 1.2**	**9.9 / 7.7**	-	<0.005	**0.011**
MW-20	10/10/2018	73.73	9.73	64.00	**3.7 / 3.2**	**19 / 19**	-	-	**0.12 / 0.12**	0.54 / 0.53	**0.88 / 0.86**	**5.8 / 5.5**	-	<0.002 / <0.002	<0.010 / <0.010
MW-21	03/29/2005	62.30	-	-	<0.40	<0.8	-	-	**0.00635**	<0.005	<0.005	<0.001	-	-	-
MW-21	12/31/2005	62.30	-	-	<0.39	<0.05	-	-	**0.00591**	<0.005	<0.005	<0.0015	-	-	-
MW-21	06/30/2006	62.30	-	-	<0.40	<0.05	-	-	**0.0155**	<0.005	<0.005	<0.0015	-	-	-
MW-21	09/18/2006	62.30	-	-	<0.24	0.051	-	-	**0.020**	<0.005	<0.005	<0.0005	-	-	-
MW-21	06/29/2007	62.30	-	-	0.032	<0.01	-	-	0.002	<0.001	<0.001	<0.001	-	-	-
MW-21	10/04/2007	62.30	7.15	55.15	0.043	0.09	-	-	**0.04**	<0.001	<0.001	<0.002	-	-	-
MW-21	06/19/2008	62.30	7.21	55.09	0.031	0.05	-	-	**0.02**	<0.001	<0.001	<0.002	-	-	-
MW-21	08/28/2008	62.87	7.49	55.38	0.009	0.04	-	-	**0.02**	<0.001	<0.001	<0.002	-	-	-
MW-21	05/14/2009	62.87	7.24	55.63	<0.50	0.018	-	-	**0.0077**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	08/27/2009	62.87	7.41	55.46	<0.052	0.028 J	-	-	**0.013**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	06/08/2010	62.87	7.33	55.54	0.17 J	<0.010	-	-	0.001 J	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	08/06/2010	62.87	7.36	55.51	<0.050	0.015 J	-	-	**0.0064**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	05/19/2011	62.87	7.32	55.55	0.24 J	0.024 J	-	-	0.0030	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	08/01/2011	62.87	7.64	55.23	<0.049	0.020 J	-	-	**0.0078**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	05/28/2012	62.87	7.21	55.66	-	-	-	-	-	-	-	-	-	-	-
MW-21	05/31/2012	-	-	-	0.55	0.014 J	-	-	**0.0055**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	07/31/2012	62.87	7.34	55.53	0.066 J	0.020 J	-	-	**0.0072**	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	05/08/2013	62.87	6.59	56.28	-	-	-	-	-	-	-	-	-	-	-
MW-21	05/09/2013	-	-	-	0.14 J	0.011 J	-	-	0.0030	<0.000077	<0.000081	<0.00022	-	-	-
MW-21[HS]	05/09/2013	-	-	-	0.73	<0.0070	-	-	0.00010 J	<0.000077	<0.000081	<0.00022	-	-	-
MW-21	09/17/2013	62.87	6.03	56.84	-	-	-	-	-	-	-	-	-	-	-
MW-21	09/18/2013	-	-	-	**2.4**	<0.050	-	-	0.0034	<0.00023	<0.00024	<0.00072	-	-	-
MW-21	06/07/2014	62.87	7.12	55.75	-	-	-	-	-	-	-	-	-	-	-
MW-21	06/11/2014	-	-	-	0.071 J	<0.050	-	-	0.0011	<0.00011	<0.00016	<0.00040	-	-	-
MW-21[HS]	06/11/2014	-	-	-	0.35 J	<0.050	-	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-
MW-21	11/04/2014	62.87	7.25	55.62	0.066 J	<0.050	-	-	0.00023 J	<0.00011	<0.00016	<0.00040	-	-	
MW-21	04/27/2015	62.87	7.31	55.56	0.066 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-21	10/23/2015	62.87	6.22	56.65	0.16 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-21	05/17/2016	62.87	6.23	56.64	0.16 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-21	09/15/2016	62.87	7.13	55.74	0.53	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-21	05/09/2017	62.87	6.24	56.63	0.099 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-21	09/01/2017	62.87	6.59	56.28	0.19 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-21	06/07/2018	62.87	6.95	55.92	<0.054	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005
MW-21	10/10/2018	62.87	7.20	55.67	<0.18 J	<0.014	-	-	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0003	<0.002

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Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-22	03/29/2005	60.59	-	-	<0.40	<0.08	-	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-22	12/31/2005	60.59	-	-	<0.39	<0.05	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	06/30/2006	60.59	-	-	<0.41	<0.05	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	09/18/2006	60.59	-	-	<0.048	<0.01	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	06/29/2007	60.59	-	-	0.066	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-22	10/04/2007	60.59	6.21	54.38	0.046	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0000096	<0.0005
MW-22	06/19/2008	60.59	7.22	53.37	0.053	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-22	08/28/2008	60.88	7.73	53.15	0.092	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-22	05/14/2009	60.88	6.41	54.47	<0.50	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	08/27/2009	60.88	7.75	53.13	<0.051	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	06/08/2010	60.88	7.32	53.56	0.36	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	08/06/2010	60.88	7.74	53.14	0.12 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	05/19/2011	60.88	7.38	53.50	0.23 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	08/01/2011	60.88	8.21	52.67	<0.048	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	05/28/2012	60.88	6.43	54.45	-	-	-	-	-	-	-	-	-	-	-
MW-22	05/31/2012	-	-	-	1.2	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	07/31/2012	60.88	7.84	53.04	0.055 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	05/08/2013	60.88	5.57	55.31	-	-	-	-	-	-	-	-	-	-	-
MW-22	05/09/2013	-	-	-	0.35 J	0.021 J	-	-	<0.000062	<0.000077	<0.000081	0.00025 J	-	-	-
MW-22[HS]	05/09/2013	-	-	-	0.31 J	<0.0070	-	-	<0.000062	<0.000077	<0.000081	<0.00022	-	-	-
MW-22	09/17/2013	60.88	5.43	55.45	-	-	-	-	-	-	-	-	-	-	-
MW-22	09/18/2013	-	-	-	**1.9**	<0.050	-	-	<0.00024	0.00025 J	<0.00024	<0.00072	-	-	-
MW-22	06/07/2014	60.88	7.35	53.53	-	-	-	-	-	-	-	-	-	-	-
MW-22	06/11/2014	-	-	-	0.094 J	<0.050 J	-	-	<0.00015 J	<0.00011 J	<0.00016 J	<0.00040 J	-	-	-
MW-22[HS]	06/11/2014	-	-	-	0.54	<0.050	-	-	<0.00015 J	<0.00011 J	<0.00016 J	<0.00040 J	-	-	-
MW-22	11/04/2014	60.88	7.66	53.22	0.26 J	<0.050	-	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-
MW-22	04/27/2015	60.88	7.33	53.55	0.051 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-22	10/23/2015	60.88	5.55	55.33	0.060 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-22	05/17/2016	60.88	6.55	54.33	0.14 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-22	09/15/2016	60.88	7.19	53.69	0.43	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-22	05/09/2017	60.88	4.89	55.99	0.16 J	0.012 J	-	-	0.004	0.001	0.015	0.14	-	-	-
MW-22	09/01/2017	60.88	6.92	53.96	0.093 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-22	06/07/2018	60.88	6.47	54.41	<0.050	<0.10	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005
MW-22	10/10/2018	60.88	7.76	53.12	<0.16 J	<0.014	-	-	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0003	<0.002
MW-23	03/29/2005	59.51	-	-	<0.40	<0.08	-	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-23	12/31/2005	59.51	-	-	<0.39	<0.05	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	06/30/2006	59.51	-	-	<0.39	<0.05	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	09/18/2006	59.51	-	-	<0.24	<0.01	-	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-23	06/29/2007	59.51	-	-	0.061	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-23	10/04/2007	59.51	5.18	54.33	0.054	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-23	06/19/2008	59.51	6.50	53.01	0.059	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-23	08/28/2008	59.94	6.97	52.97	0.120	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-23	05/14/2009	59.94	5.60	54.34	<0.50	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	08/27/2009	59.94	6.87	53.07	0.051 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	06/08/2010	59.94	6.21	53.73	<0.50	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	08/06/2010	59.94	6.73	53.21	0.12 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	05/19/2011	59.94	6.41	53.53	0.24 J	0.013 J	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	08/01/2011	59.94	7.29	52.65	0.050 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**
MW-23	05/28/2012	59.94	5.51	54.43	-	-	-	-	-	-	-	-	-	-	-
MW-23	05/31/2012	-	-	-	0.52	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	07/31/2012	59.94	6.82	53.12	0.073 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	05/08/2013	59.94	5.27	54.67	-	-	-	-	-	-	-	-	-	-	-
MW-23	05/09/2013	-	-	-	0.27 J	0.029 J	-	-	<0.000062	<0.000077	<0.000081	<0.00022	-	-	-
MW-23[HS]	05/09/2013	-	-	-	0.27 J	<0.0070	-	-	<0.000062	<0.000077	<0.000081	<0.00022	-	-	-
MW-23	09/17/2013	59.94	4.71	55.23	-	-	-	-	-	-	-	-	-	-	-
MW-23	09/18/2013	-	-	-	**1.8**	<0.050	-	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-
MW-23	06/07/2014	59.94	6.23	53.71	-	-	-	-	-	-	-	-	-	-	-
MW-23	06/11/2014	-	-	-	0.13 J	<0.050	-	-	<0.00015 J	<0.00011 J	<0.00016 J	<0.00040 J	-	-	-
MW-23[HS]	06/11/2014	-	-	-	0.086 J	<0.050	-	-	<0.00015	<0.00011	<0.00016	<0.00040	-	-	-
MW-23	11/04/2014	59.94	6.69	53.25	0.14 J	<0.050	-	-	<0.00015	0.00015 J	0.00024 J	<0.00040	-	-	
MW-23	04/27/2015	59.94	5.98	53.96	0.12 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-23	10/23/2015	59.94	4.53	55.41	0.080 J	0.030 J	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-23	05/17/2016	59.94	5.12	54.82	0.18 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-23	09/15/2016	59.94	5.60	54.34	0.42	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-23	05/09/2017	59.94	4.06	55.88	0.17 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-23	09/01/2017	59.94	5.44	54.50	0.31 J	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
MW-23	06/07/2018	59.94	5.11	54.83	<0.051	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005
MW-23	10/10/2018	59.94	6.06	53.88	0.26	<0.014	-	-	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0003	<0.002
Trip Blank	10/04/2007	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.002	-	<0.0000096	<0.0005
Trip Blank	06/19/2008	-	-	-	-	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
Trip Blank	08/28/2008	-	-	-	-	<0.01	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
Trip Blank	02/16/2009	-	-	-	-	-	-	-	<0.001	<0.001	<0.001	<0.002	-	-	-
Trip Blank	04/29/2009	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	08/19/2009	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	06/08/2010	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	08/06/2010	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	05/19/2011	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	08/01/2011	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	05/31/2012	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	07/31/2012	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	05/09/2013	-	-	-	-	<0.0070	-	-	<0.000062	<0.000077	<0.000081	<0.00022	-	-	-
Trip Blank	09/18/2013	-	-	-	-	<0.050	-	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-
Trip Blank	06/11/2014	-	-	-	-	<0.050	-	-	<0.00015 / <0.00015	<0.00011 / <0.00011	<0.00016 / <0.00016	<0.00040 / <0.00040	-	-	-
Trip Blank	11/04/2014	-	-	-	-	-	-	-	<0.00015 / <0.00015	<0.00011 / <0.00011	<0.00016 / <0.00016	<0.00040 / <0.00040	-	-	-
Trip Blank	04/27/2015	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	10/23/2015	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
Trip Blank	05/17/2016	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
Trip Blank	05/09/2017	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
Trip Blank	09/01/2017	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-
Trip Blank	06/07/2018	-	-	-	-	<0.010	-	-	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005
Trip Blank	10/10/2018	-	-	-	-	<0.014	-	-	<0.0002	<0.0002	<0.0002	<0.0005	-	<0.0003	<0.002

Table 2

Historical Groundwater Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	TOC	DTW	GWE	HYDROCARBONS				PRIMARY VOCS				ADDITIONAL VOC'S		
					DRO	GRO	TPH	Oil and Grease	Benzene	Toluene	Ethylbenzene	Total Xylenes	HVOCs	EDB	1,2-DCA
	Units	ft msl	ft btoc	ft msl	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					**1.5**	**2.2**			**0.0046**	**1.1**	**0.015**	**0.19**		**0.000075**	**0.0017**

Notes and Abbreviations

TOC = top of casing
DTW = depth to water
GWE = groundwater elevation
TPH = total petroleum hydrocarbons
DRO = diesel range organics by Alaska Series Method AK102
GRO = gasoline range organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B or SW-E46 8021B
Total Xylenes = Sum of m-, o-, and p-xylenes
HVOC = volatile organic compounds by EPA Method 524.2
EDB = ethylene dibromide
1,2-DCA = 1,2-dichloroethane
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
HS = collected via hydrasleeve
ND = Not detected

Table 3

Groundwater PAH Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	PAH							
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels		**0.53**	**0.26**	**0.043**	**0.00030**	**0.00025**	**0.0025**	**0.00026**	**0.0008**
MW-5	05/17/2016	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096
MW-11A	06/08/2010	<0.000011	<0.000011	<0.000011	<0.000011	<0.000011	<0.000011	<0.000011	<0.000011
MW-11A	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW-20A	06/08/2010	0.000045 J / 0.000039 J	0.000033 J / 0.000048 J	<0.000011 / <0.000010	<0.000011 / <0.00001	<0.000011 / <0.00001	<0.000011 / <0.00001	<0.000011 / <0.00001	<0.000011 / <0.00001
MW-20	05/17/2016	0.000054 / 0.000053	0.000040 J / 0.000036 J	0.000023 J / 0.000021 J	<0.0000096 / <0.0000096	<0.0000096 / <0.0000096	<0.0000096 / <0.0000096	<0.0000096 / <0.0000096	<0.0000096 / <0.0000096
MW-20	06/07/2018	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001
MW-19	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW-21	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001 J	<0.00001
MW-22	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
MW-23	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001

Table 3

Groundwater PAH Analytical Results
Former Unocal Station 4652
Chevron Site 306448
1441 C Street
Anchorage, Alaska

Location	Date	PAH							
	Units	Chrysene mg/L	Dibenz(a,h)anthracene mg/L	Fluoranthene mg/L	Fluorene mg/L	Indeno(1,2,3-cd)pyrene mg/L	Naphthalene mg/L	Phenanthrene mg/L	Pyrene mg/L
ADEC Groundwater Cleanup Levels		**0.002**	**0.00025**	**0.26**	**0.29**	**0.00019**	**0.0017**	**0.17**	**0.12**
MW-5	05/17/2016	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.000029	<0.000029	<0.0000096
MW-11A	06/08/2010	<0.000011	<0.000011	<0.000011	<0.000011	<0.000011	**0.0020**	<0.000011	<0.000011
MW-11A	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	**0.0020**	<0.00003	<0.00002
MW-20A	06/08/2010	<0.000011 / <0.00001	<0.000011 / <0.00001	<0.000011 / <0.000010	0.000057 / 0.000055	<0.000011 / <0.00001	**0.13 / 0.13**	0.000049 J / 0.000044 J	<0.000011 / <0.000010
MW-20	05/17/2016	0.000024 J / 0.000023 J	<0.0000096 / <0.0000096	<0.0000096 / <0.0000096	0.000025 J / 0.000023 J	<0.0000096 / <0.0000096	**0.11 / 0.098**	0.000034 J / 0.000033 J	<0.0000096 / <0.0000096
MW-20	06/07/2018	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	<0.0001 / <0.0001	**0.16 / 0.14**	<0.0003 / <0.0003	<0.0002 / <0.0002
MW-19	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0001	<0.00003	<0.00002
MW-21	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	0.00001 J	0.0003	<0.00003	<0.00002
MW-22	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0001	<0.00003	<0.00002
MW-23	06/07/2018	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00004 J	<0.00003	<0.00002

Notes and Abbreviations

PAHs = poly aromatic hydrocarbons by Method SW8270

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

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

Appendix A
Site Photographs

1. Site layout looking Northeast

2. Site layout looking Northwest

3. Site layout looking Southeast

4. Site layout looking Southwest

FORMER UNOCAL STATION 4652/CHEVRON SITE 306448
1441 C STREET
ANCHORAGE, ALASKA

621049-95

Sep 13, 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 306448

File Number: 2100.26.117

Completed by: GHD Services, Inc.

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, 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 306448
ADEC File ID: 2100.260117

Completed By: Travis Weaver
Date Completed: 7/6/17

***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):
☐ Groundwater	☐ 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	C/F	F	C/F	C/F			
	☐ Dermal Absorption of Contaminants from Soil							
	☐ Inhalation of Fugitive Dust							
☑ groundwater	☑ Ingestion of Groundwater	C/F	F	C/F	C/F			
	☐ Dermal Absorption of Contaminants in Groundwater							
	☐ Inhalation of Volatile Compounds in Tap Water							
☑ air	☑ Inhalation of Outdoor Air	C/F	F	C/F	C/F			
	☑ Inhalation of Indoor Air	C/F	F	C/F	C/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 306498	GHD Project Manager: S. PRITCHARD	Field Rep: O. YAIN / T. WEAVER
Project Number: 621049	Date: 10/10/18	Site Address: 1441 C STREET, ANCHORAGE, AK
Scope of Work:		
Equipment: YSI-556 / TURBIDITY METER / MP-50 / WATER LEVEL METER (06784) (10223AK) (16604)		Weather: CLOUDY; CHANCE OF RAIN (10%)

Time	Activity/Comments	SWA
0745	CALIBRATE YSI-556/TURBIDITY METER/WATER LEVEL METER	
0754	HEAD TO FEDEX TO DROP OFF SAMPLES/PICK UP SUPPLIES AT TTT	
0832	HEAD TO SITE	
0839	ARRIVE ONSITE; NOTIFY PM; CONDUCT TAILGATE	
0858	START GAUGING WELLS → START W/ OFFSITE WELLS.	
0909	MOB TO ON SITE WELLS.	
	↳ NORTH GATE ALONG ALLEY HAS A NEW/DIFFERENT LOCK, ENTER GATE ALONG 15 AVE	
	↳ WASTE DRUMS HAVE BEEN REMOVED & SOMEONE MOWED/LAWN CARE	
0919	NOTIFY PM → INSTRUCTED TO CUT LOCK & REPLACE W/ 3910 LOCK	
0922	GAUGE ALL ON SITE WELLS & MOB BACK TO OFF SITE	
0944	START LOW FLOW PURGE PARAMETER MONITORING @ MW-21	
0950	SHEICA W/ PTP PROPERTY MANAGEMENT STOPPED TO SEE WHERE WELLS ARE LOCATED & ASK ABOUT PROCEDURES & SITE HISTORY	
	↳ SHEILA ASKS TO BE ADDED TO NOTIFICATION LIST & RECEIVE REPORTS GOING FORWARD	
1015	COLLECT SAMPLE MW-21-W-181010, DECON EQUIPMENT & FILTER 0.5 GAL THRU GAC	
1038	START LOW FLOW PURGE PARAMETER MONITORING @ MW-22	
1109	COLLECT MW-22 GW SAMPLE; DECON EQUIPMENT; PURGED 0.5 GAL THROUGH GAC.	
1134	START LOW FLOW PURGE PARAMETER MONITORING @ MW-23	
1205	COLLECT SAMPLE MW-23-W-181010, DECON EQUIPMENT & PURGE 0.4 GAL PURGE THRU GAC	
	↳ NOT ENOUGH SAMPLE CONTAINERS OR LABELS, CALL EUROFINS, THEY MISCALCULATED	
1216	LOAD EQUIPMENT & MOB TO OFFICE TO PICK UP SPARE/EXTRA SAMPLING SUPPLIES	
	↳ MOB BACK TO SITE	
1305	START LOW FLOW PURGE PARAMETER MONITORING @ MW-19, REPLACE LOCK ON GATE	
1336	COLLECT SAMPLE MW-19-W-181010, DECON EQUIPMENT & FILTER 0.4 GAL THRU GAC	
1341	SET UP ON MW-19A	

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

~~Operational Mileage: Start~~ _____ End _____ Total _____

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

Project Number: 621049 Date: 10/10/18

Time	Activity/Comments	SWA
1350	START LF PURGE SAMPLING AT MW-11A ; COLLECT GW PARAMETER READINGS	
1421	COLLECT MW-11A-W-181010 GW SAMPLE ; DECON EQUIPMENT ; PURGED 0.4 GAL THROUGH GAC	
1428	SET UP ON WELL MW-20.	
1437	START LF PURGE SAMPLING @ MW-20, COLLECT GW PARAMETERS	
1507	COLLECT MW-20-W-181010/DUP-1-W-181010 SAMPLES; DECON EQUIPMENT ; PURGE 0.5 GAL	
	THROUGH GAC ; TOTAL DECON THROUGH GAC = 2.1 GAL	
1515	SITE CLEANUP; PACK EVERYTHING	
1520	HEAD TO TTT TO DROP OFF EQUIPMENT.	
1535	BACK @ OFFICE ; DROP OFF SAMPLES IN FRIDGE.	
	TOTAL PURGE/DECON THROUGH GAC= 4.8 GAL	

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

Groundwater Monitoring Field Sheet

Project Name: 306448 (ADEC File ID: 2100.26.117)
Project Number: 621049
Field Staff: T. Weaver / O. Yan
Date: OCTOBER 10, 2018

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-4	0922	8.63	16.59	--	--	—	2"	--	Gauge only
MW-5	0924	9.99	13.51	--	--	—	2"	--	Gauge only
MW-11A	0917	9.44	12.26	--	--	—	2"	--	
MW-19	0925	10.49	17.36	--	--	—	4"	--	
MW-20	0928	9.73	16.37	--	--	—	4"	--	
MW-21	0902	7.20	19.30	--	--	—	2"	--	
MW-22	0904	7.76	16.95	--	--	—	2"	--	
MW-23	0907	6.06	16.69	--	--	—	2"	--	

GAC Filtered Water Volume: 4.8 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. 621049 PM Siobhan Pritchard Well ID MW-11A Date 10/10/18 Page 1 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

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

Static Water Level (ft-btoc) 9.44 Total Depth (ft-btoc) ~~16.95~~ 12.26 by 10/10/19 Water Column / Gallons in Well 2.82 / 0.451

Sample ID MW-11A-W-181010 Dup ID — Sample Time 1421 Start End

No-Purge Method

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

Weights ... Position Suspended ☐ Bottom ☐ Bottom set ☐

W...ellon Bailer used to collect non volatile samples Yes ☐ No ☐

Low-Flow Sampling

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 10.20

Flow rate (ml/minute) 45 – 80 Volumes Purged 0.40 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1350 End 1420

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
1355	5	80	9.60	0.05	14.49	0.858	3.46	6.95	49.2	68.6	CLEAR
1400	10	45	9.58	0.10	14.63	0.857	1.80	7.00	29.5	67.0	" "
1405	15	55	9.59	0.15	14.57	0.869	1.48	6.98	1.2	50.6	" "
1410	20	55	9.60	0.20	13.90	0.875	0.98	6.92	-31.0	43.4	" "
1415	25	55	9.61	0.25	13.99	0.877	0.79	6.91	-46.1	29.0	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	~~1SA18 event only~~	~~Included in above~~		
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~~	■	~~1SA18 event only~~	~~1L amber~~	~~2~~	None
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 Well Locked at Arrival: Yes / No

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

Well Completion: Flush Mount / Stick Up

Additional Notes

Groundwater Sampling Form

Project No. 621049 PM Siobhan Pritchard Well ID MW-19 Date 10/10/19 Page 2 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

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

Sample ID MW-19-W-191010

Static Water Level (ft-btoc) 10.49 Total Depth (ft-btoc) 17.35 Water Column / Gallons in Well 6.87 / 4.466 Dup ID ____

Sample Time 1335 Start ____ End ____

No-Purge Method

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

Weights ____ Position ____

Teflon Bailer used to collect non volatile samples

Low-Flow Sampling

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 11.15

Flow rate (ml/minute) 50 - 100 Volumes Purged 0.40 Gal

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 1305 End 1335

Suspended ☐ Bottom set ☐ 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	100	10.54	0.05	11.64	0.727	4.92	7.22	115.5	8.11	CLEAR
1315	10	70	10.57	0.15	11.86	0.718	3.41	7.14	109.6	9.06	" "
1320	15	70	10.60	0.25	11.83	0.711	3.35	7.15	108.0	8.18	" "
1325	20	50	10.61	0.30	12.15	0.711	3.28	7.22	107.1	7.62	" "
1330	25	50	10.63	0.35	12.34	0.710	3.37	7.24	107.0	7.66	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	1SA18 event only	Included in above		
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~~	■	1SA18 event only	1L amber	~~2~~	None
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. 621049 PM Siobhan Pritchard Well ID MW-20 Date 10/10/24 Page 3 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

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

Static Water Level (ft-btoc) 9.73 Total Depth (ft-btoc) 16.37 Water Column / Gallons in Well 6.64 / 4.316

Sample ID MW-20-W-181010 Dup ID DUP-1-W-181010 Sample Time 1508 Start ____ End ____

No-Purge Method

Sampler Length (in) 36 ☐ 30 ☐ Depth of Sam... Low-Flow Sampling

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

W... Teflon Baler used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 10.45

Volumes Purged 0.50 cm

Flow rate (ml/minute) 440-85 Purge Time: Start 1438

Did well Dewater? Yes ☐ No ☒ End 1509

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
1442	5	85	9.85	0.05	12.96	0.898	2.25	6.86	-22.5	9.02	CLEAR
1447	10	40	9.88	0.10	12.99	0.896	1.56	6.89	-25.5	6.27	" "
1452	15	60	9.89	0.15	13.10	0.893	1.36	6.73	-26.5	5.88	" "
1457	20	60	9.90	0.20	13.06	0.895	1.30	6.73	-27.5	5.76	" "
1502	25	60	9.92	0.25	12.73	0.901	1.41	6.73	-29.9	2.85	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	1SA18 event only	Included in above		
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~~	■	1SA18 event only	1L amber	~~2~~	None
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: NA Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: GOOD 5

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. 621049 PM Siobhan Pritchard Well ID MW-21 Date 10/10/18 Page 4 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

Screen Setting (ft-btoc) 6-16 Casing Diameter (in.) 2" Well Material x PVC ☐ SS ☐ Sampled by T. Weaver, O. Yan

Static Water Level (ft-btoc) 7.20 Total Depth (ft-btoc) 19.30 Water Column / Gallons in Well 12.1 / 1.936

Sample ID MW-21-W-181010 Dup ID — Sample Time 1015 Start ____ End ____

No-Purge Method

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

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) 7.20 - 8.15

Flow rate (ml/minute) 50-110 Volumes Purged 0.50 GAL

Did well Dewater? Yes ☐ No ☒ Purge Time: Start 0944 End 1014

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
0949	5	—	—	0.05	10.58	0.543	13.26	6.94	173.0	—	CLEAR
0954	10	110	7.76	0.15	9.49	0.655	5.23	8.07	151.5	—	CLEAR
0959	15	50	7.80	0.20	9.32	0.650	4.35	8.13	152.5	27.3	" "
1004	20	50	7.78	0.25	8.94	0.647	4.03	8.14	147.1	24.2	" "
1009	25	50	7.81	0.30	8.62	0.644	3.21	8.21	143.7	20.3	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	1SA18 event only	~~Included in above~~		
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~~	■	1SA18 event only	~~1L amber~~	~~2~~	None
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: OFFSITE - PLANTOL FOR BRISTOL

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 → GREATER THAN 0.3 FEET

Groundwater Sampling Form

Project No. 621049 PM Siobhan Pritchard Well ID MW-22 Date 10/10/18 Page 5 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

Screen Setting (ft-btoc) 4-14 Casing Diameter (in.) 2" Well Material x PVC / SS Sampled by T. Weaver / O. Yan

Static Water Level (ft-btoc) 7.61 Total Depth (ft-btoc) 16.95 Water Column / Gallons in Well 9.34 / 1.494

Sample ID MW-22-W-181010 Dup ID — Sample Time 1109 Start ____ End ____

No-Purge Method

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

Weights ... Position Supended ☐ Bottom set ☐

Low-Flow Sampling

Bottom ☐

Yes ☐ No ☐

Peristaltic Pump used to collect non volatile samples

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 8.25

Volumes Purged 0.5 GAL

Flow rate (ml/minute) 50-90 Purge Time: Start 1038

Did well Dewater? Yes ☒ No ☐ End 1108

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
1043	5	90	7.90	0.05	9.78	2.450	7.98	7.14	151.9	40.0	CLEAR
1048	10	50	7.95	0.10	9.68	2.444	2.72	7.12	147.6	35.3	" "
1053	15	50	7.98	0.15	9.62	2.412	2.61	7.13	144.3	27.5	" "
1058	20	50	8.01	0.20	9.61	2.392	2.66	7.13	142.4	21.4	" "
1103	25	50	7.98	0.25	9.73	2.382	2.99	7.13	141.4	17.6	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	~~1SA18 event only~~	~~Included in above~~		
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~~	■	~~1SA18 event only~~	1L amber	~~2~~	None
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: N/A Ferrous Iron mg/L Nitrate mg/L Other

Well Information

Well Location: OFFSITE - BRISTOL PROPERTY

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

DEWATERED > 0.3 ; EVEN THOUGH @ 45-50 mL/min already

Groundwater Sampling Form

Project No. 621049 PM Siobhan Pritchard Well ID MW-23 Date 10/10/18 Page 6 of 6

Site ID / Location 306448 / 1441 C Street, Anchorage, Alaska (ADEC File ID: 2100.26.117)

Screen Setting (ft-btoc) 4-14 Casing Diameter (in.) 2" Well Material x PVC SS

Sampled by T. Weaver, O. Yan

Sample ID MW-23-W-181010

Dup ID —

Static Water Level (ft-btoc) 6.06 Total Depth (ft-btoc) 16.69 Water Column / Gallons in Well 10.63 / 1.701

Sample Time 1205 Start End

No-Purge Method

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

Weights Position Suspended ☐ Bottom set ☐

Low-Flow Sampling

Bottom ☐

Was Bailer used to collect non volatile samples Yes ☐ No ☐

Low Flow Method

Pump type Bladder ☒ Other ☐ Pump Intake (ft-btoc) 6.90

Volumes Purged 0.40 Gals

Flow rate (ml/minute) 40 – 80 Purge Time: Start 1134

Did well Dewater? Yes ☐ No ☒ End 1204

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
1139	5	80	6.16	0.05	10.93	1.436	3.58	6.81	127.3	20.4	CLEAR
1144	10	40	6.18	0.10	10.70	1.428	2.32	6.75	126.0	18.0	" "
1149	15	60	6.23	0.15	10.57	1.444	2.24	6.75	125.7	15.7	" "
1154	20	60	6.25	0.25	10.36	1.484	2.03	6.74	126.5	10.6	" "
1159	25	50	6.22	0.30	10.43	1.499	1.99	6.75	126.9	4.46	" "

Constituents Sampled			Container	Number	Preservative
BTEX by 8260	■		40 mL vial	3	HCl
~~Full Scan VOCs by 8260~~	■	~~1SA18 event only~~	~~Included in above~~		
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~~	■	~~1SA18 event only~~	~~1L amber~~	~~2~~	None
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: OFFSITE; RESIDENTIAL PROPERTY

Condition of Well: GOOD

Well Completion: Flush Mount / Stick Up

Well Locked at Arrival: Yes / No

Well Locked at Departure: Yes / No

Additional Notes

Portable GAC Volume Tracking Log

Site ID	Project No.	Date	Volume Filtered through GAC (gallons)	Filter location description
92609	620911	6/11/18	6.35 GAL	CENTER OF SITE IN THE VICINITY OF MW-3/MW-9 PLANTER AREA
92609	620911	6/12/18	4.35 GAL	" "
95414	062327	6/18/18	5.10 GAL	PURGED THROUGH PLANTER NEAR MW-3/MW-2. AT CENTER OF SITE
95414	062327	6/19/18	6.30 GAL	PLANTER UPGRADIENT OF MW-10, PLANTER/SIDE OF SITE, EAST OF MW-5.
351860	065008	6/19/18	5.50 GAL	PLANTER WESTERN SIDE OF SITE.
351860	065004	6/20/18	6.10 GAL	SOUTH WEST SIDE OF SITE
211078	622233	6/12/18	4.20 GAL	CENTER OF SITE
95414	062327	08/08/18	4.10 GAL	PURGE WATER THROUGH GAC AT PLANTER ARE BETWEEN CHEVRON/ARCTIC RAND RUNNER
95414	062327	08/08/18	3.40 GAL	↓ ↓
306449	082676	08/09/18	4.40 GAL	PLANTER BETWEEN SITE (UP GRADIENT).
211081	062324	08/20/18	0.9 GAL	PLANTER NE OF STATION
211079	065003	08/20/18	5.15 GAL	FENCED AREA BEHIND MARKET
211083	065004	08/21/18	12.1 GAL	GRASS SW OF ALSTATE1
211079	065003	8/22/18	4.2 GAL	FENCED AREA BEHIND MARKET
91518	062325	8/28/18	6.1 GAL	PLANTER SOUTH OF WENDY'S
90430	065001	8/29/18	8.1 GAL	CENTER OF THE SITE (BETWEEN MW-7/MW-5K)
92555	062326	8/30/18	6.7 GAL	PLANTER ALONG 9TH AVENUE, FIX IT SITE
92555	062326	8/31/18	6.75 GAL	PLANTER CENTERS AND CENTER OF SITE.
91252	622059	9/4/18	11 GAL	PLANTER EAST OF SITE (UPGRADIENT) BY STATION SIGN.
91356	622232	9/5/18	6.8 GAL	PLANTER AREA BY THE CHEVRON STATION BY STATION BUILDING
306451	621048	9/6/18	3.5 GAL	SOUTH OF STATION BUILDING
92609	620911	9/10/18	4.75 GAL	CENTER OF SITE;
92609	620911	9/11/18	5.45 GAL	CENTER OF SITE;
96097	062328	9/13/18	6.5 GAL	CENTER OF SITE → PLANTER IN BETWEEN RILEY'S AND SITE
96097	062328	9/14/18	5.6 GAL	CENTER OF SITE → PLANTER IN BETWEEN RILEY'S AND SITE
98557	060361	9/25/18	14.4 GAL	PLANTER AREA BY STATION BUILDING
99014	062329	9/26/18	8.9 GAL	PLANTER BY CHEVRON STATION SIGN
99014	062329	9/27/18	9.0 GAL	PLANTER BY THRIFTY PROPERTY, ALONG BUILDING
99014	062329	9/28/18	6.5 GAL	PLANTER BY THRIFTY PROPERTY, ALONG BUILDING
211074	612064	10/8/18	5.7 GAL	GRASS SOUTH OF DP-4D
211074	612064	10/9/18	10.35 GAL	GRASS SOUTH OF DP-4D
306448	621049	10/10/18	4.8 GAL	CENTER OF SITE

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

Control number: 102373AN (TTT ENV)
Date (mm/dd/yyyy): 10/10/18
User (print name): YAN, OLIVER

Project number: 621045
Project name: CEMC JOB#98

Location: 1411 C STREET ANCHORAGE, AK

Calibration solution(s):	pH 7.0	pH 4.0	CONDUCTIVITY	ORP
Lot #(s):	264856-A01		265373-A01	
Supplier(s):	OAKTON	OAKTON	OAKTON	HANNA
Expiration date(s):	03/2020		03/2020	

Additional information:

Field procedure before use:

	Check when completed
• Check kit contents.	☑
• Check pH 7 buffer reading. Calibrate if greater than ±0.2.	Reading 7.04
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 _____
• 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 1.428
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.	Standard 240 mV Reading 240.4 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: 16604 (TTT ENV RENTAL)
Date (mm/dd/yyyy): 10/10/18
User (print name): YAN, OLIVER

Project number: 621049
Project name: CEMC 306498

Location: 1441 C STREET
ANCHORAGE, AK

Additional equipment control numbers and descriptions:

NTU:	20	100	800	0.1
LOT:	A8206	A8199	A8206	A8193
EXP:	NOV-19	NOV-19	NOV-19	OCT-19

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:

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

Control number: 06784
Date (mm/dd/yyyy): 10/10/18
User (print name): YAN, OLIVER

Project number: CEMC 306498
Project name: 621095

Location: 1441 C STREET
ANCHORAGE, 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:

Chevron Generic Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # _____ Group # _____ Sample # _____

For Eurofins Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information

Facility # CEMC 306448

WBS 06.02

Site Address 1441 L STREET, ANCHORAGE, AK

Chevron PM ERIC HOTRICK

Lead Consultant I-HD

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

Consultant Project Mgr. SIOBHAN PRITCHARD

Consultant Phone # 970-222-3220

Sampler D VAN J T WEAVER

4 Matrix

Soil ☐ Sediment ☐ Water ☒ Ground ☐ Potable ☐ NPDES ☐ Surface ☐ Oil ☐ Air ☐

3 Grab / Composite

2 Sample Identification / Collected (Date, Time)

5 Analyses Requested

Total Number of Containers; BTEX + MTBE ☐ 8021 ☐ 8260 ☐ Naphth ☐; 8260 full scan; Oxygenates ☐; TPH-GRO ☐ 8015 ☐ 8260 ☐ AK-101; TPH-DRO AK-102; Silica Gel Cleanup ☐; Lead ☐ Total ☐ Diss. ☐ Method ____; VPH ☐ EPH ☐ Method ____

2 Sample Identification	Collected Date	Collected Time	3 Grab	3 Composite	4 Soil	4 Water	4 Oil	Total Number of Containers	5 BTEX + MTBE 8021 8260 Naphth	5 8260 full scan	5 Oxygenates	5 TPH-GRO 8015 8260 AK-101	5 TPH-DRO AK-102	5 Silica Gel Cleanup	5 Lead Total Diss. Method	5 VPH EPH Method
MW-21-W-181010	10/10/18	1015	X			X		8		X		X	X			
MW-22-W-181010	10/10/18	1109	X			X		8		X		X	X			
MW-23-W-181010	10/10/18	1205	X			X		8		X		X	X			
MW-19-W-181010	10/10/18	1336	X			X		8		X		X	X			
MW-11A-W-181010	10/10/18	1421	X			X		8		X		X	X			
MW-20-W-181010	10/10/18	1507	X			X		8		X		X	X			
DUP-1-W-181010	10/10/18	~	X			X		8		X		X	X			
QA-1-W-181010	~	~	~			~		2		X		X				

6 Remarks

EMAIL RESULTS TO:

SIOBHAN.PRITCHARD@GHD.COM

- ☐ 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

7 Turnaround Time Requested (TAT) (please circle)

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

8 Data Package (circle if required)

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

EDD (circle if required): CVX-RTBU-FI_05 (default) | Other: _____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/11/18	1013			

Relinquished by Commerical Carrier: UPS _____ FedEx ✓ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

9

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

Issued by Dept. 40 Management

7047.02

Appendix D
Laboratory Analytical Report

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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: October 26, 2018 10:48

Project: 306448

Account #: 10880
Group Number: 1998078
PO Number: 0015279745
Release Number: HETRICK
State of Sample Origin: AK

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

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

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

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-21-W-181010 Grab Groundwater	10/10/2018 10:15	9850229
MW-22-W-181010 Grab Groundwater	10/10/2018 11:09	9850230
MW-23-W-181010 Grab Groundwater	10/10/2018 12:05	9850231
MW-19-W-181010 Grab Groundwater	10/10/2018 13:36	9850232
MW-11A-W-181010 Grab Groundwater	10/10/2018 14:21	9850233
MW-20-W-181010 Grab Groundwater	10/10/2018 15:07	9850234
DUP-1-WD-181010 Grab Groundwater	10/10/2018	9850235
QA-1-T-W-181010 NA Water	10/10/2018	9850236

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

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

Project Name: 306448
ELLE Group #: 1998078

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:

SW-846 8260B, GC/MS Volatiles

Sample #s: 9850232, 9850233, 9850234, 9850235

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane.

Batch #: 4182961AA (Sample number(s): 9850229-9850231, 9850236)

The recovery(ies) for the following analyte(s) in the LCS and/or LCSD exceeded the acceptance window indicating a positive bias: 1,1,1-Trichloroethane, 1,2-Dichloroethane

Batch #: 4182971AA (Sample number(s): 9850232-9850235 UNSPK: 9850232)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Chloromethane

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: 1,1-Dichloroethene, Methylene Chloride, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene, Chloroform, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloroethane, Trichloroethene, Bromodichloromethane, Chlorobenzene, Isopropylbenzene, Xylene (Total), Freon 113

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

Sample #s: 9850229, 9850230, 9850231, 9850232, 9850233

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Description: **MW-21-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 10:15

ChevronTexaco
ELLE Sample #: WW 9850229
ELLE Group #: 1998078
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.	0.0008	0.020	1
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1

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

Sample Description: **MW-21-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 10:15

ChevronTexaco
ELLE Sample #: WW 9850229
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.18 J	0.053	0.27	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182961AA	10/23/2018 15:17	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182961AA	10/23/2018 15:17	Corie Mellinger	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 01:24	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 01:24	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 19:29	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-22-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 11:09

ChevronTexaco
ELLE Sample #: WW 9850230
ELLE Group #: 1998078
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.	0.0008	0.020	1
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1

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

Sample Description: **MW-22-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 11:09

ChevronTexaco
ELLE Sample #: WW 9850230
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	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	0.054	0.27	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182961AA	10/23/2018 15:40	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182961AA	10/23/2018 15:40	Corie Mellinger	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 02:41	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 02:41	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 19:57	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-23-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 12:05

ChevronTexaco
ELLE Sample #: WW 9850231
ELLE Group #: 1998078
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.	0.0008	0.020	1
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	0.010	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1

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

Sample Description: **MW-23-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 12:05

ChevronTexaco
ELLE Sample #: WW 9850231
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.26	0.051	0.26	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182961AA	10/23/2018 16:02	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182961AA	10/23/2018 16:02	Corie Mellinger	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 03:06	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 03:06	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 20:26	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-19-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 13:36

ChevronTexaco
ELLE Sample #: WW 9850232
ELLE Group #: 1998078
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.	0.0008	0.020	1
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	0.003	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1

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

Sample Description: **MW-19-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 13:36

ChevronTexaco
ELLE Sample #: WW 9850232
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane.

GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.12 J	0.051	0.26	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 14:52	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182971AA	10/24/2018 14:52	Angela D Sneeringer	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 03:32	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 03:32	Jeremy C Giffin	1
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 20:54	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-11A-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 14:21

ChevronTexaco
ELLE Sample #: WW 9850233
ELLE Group #: 1998078
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.	0.0008	0.020	1
10335	Benzene	71-43-2	0.076	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	0.20	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	0.006	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	0.012	0.0002	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	0.039	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	0.066	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	0.002	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	0.0006 J	0.0002	0.001	1

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

Sample Description: **MW-11A-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 14:21

ChevronTexaco
ELLE Sample #: WW 9850233
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	1.2	0.001	0.010	2

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane.

GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	3.9	0.070	0.50	5
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	0.43	0.054	0.27	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The client was contacted and the data reported.

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 16:00	Angela D Sneeringer	2
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 20:09	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182971AA	10/24/2018 16:00	Angela D Sneeringer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	4182971AA	10/24/2018 20:09	Angela D Sneeringer	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 03:57	Jeremy C Giffin	5
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 03:57	Jeremy C Giffin	5
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 21:22	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **MW-20-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

ChevronTexaco
ELLE Sample #: WW 9850234
ELLE Group #: 1998078
Matrix: Groundwater

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 15:07

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.	0.004	0.10	5
10335	Benzene	71-43-2	0.12	0.001	0.005	5
10335	Bromodichloromethane	75-27-4	N.D.	0.001	0.005	5
10335	Bromoform	75-25-2	N.D.	0.010	0.025	5
10335	Bromomethane	74-83-9	N.D.	0.003	0.005	5
10335	2-Butanone	78-93-3	N.D.	0.005	0.050	5
10335	Carbon Disulfide	75-15-0	N.D.	0.002	0.025	5
10335	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	5
10335	Chlorobenzene	108-90-7	N.D.	0.001	0.005	5
10335	Chloroethane	75-00-3	N.D.	0.002	0.005	5
10335	Chloroform	67-66-3	N.D.	0.001	0.005	5
10335	Chloromethane	74-87-3	N.D.	0.002	0.005	5
10335	Cyclohexane	110-82-7	0.10	0.010	0.025	5
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.005	0.025	5
10335	Dibromochloromethane	124-48-1	N.D.	0.002	0.005	5
10335	1,2-Dibromoethane	106-93-4	N.D.	0.002	0.005	5
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.025	5
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.025	5
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.025	5
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.002	0.005	5
10335	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.005	5
10335	1,2-Dichloroethane	107-06-2	N.D.	0.010	0.025	5
10335	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	5
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.005	5
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.005	5
10335	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.005	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.005	5
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.005	5
10335	Ethylbenzene	100-41-4	0.88	0.001	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
10335	Isopropylbenzene	98-82-8	0.045	0.002	0.025	5
10335	Methyl Acetate	79-20-9	N.D.	0.003	0.025	5
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.001	0.005	5
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.050	5
10335	Methylcyclohexane	108-87-2	0.066	0.001	0.025	5
10335	Methylene Chloride	75-09-2	0.003 J	0.001	0.005	5
10335	Styrene	100-42-5	N.D.	0.001	0.025	5
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.005	5
10335	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	5
10335	Toluene	108-88-3	0.54	0.001	0.005	5

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

Sample Description: **MW-20-W-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018 15:07

ChevronTexaco
ELLE Sample #: WW 9850234
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.002	0.025	5
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.005	5
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.005	5
10335	Trichloroethene	79-01-6	N.D.	0.001	0.005	5
10335	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.005	5
10335	Vinyl Chloride	75-01-4	N.D.	0.002	0.005	5
10335	Xylene (Total)	1330-20-7	5.8	0.025	0.25	50
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane.					
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	19	0.14	1.0	10
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	3.7	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 16:45	Angela D Sneeringer	5
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 17:08	Angela D Sneeringer	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182971AA	10/24/2018 16:45	Angela D Sneeringer	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	4182971AA	10/24/2018 17:08	Angela D Sneeringer	50
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 04:23	Jeremy C Giffin	10
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 04:23	Jeremy C Giffin	10
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 21:51	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **DUP-1-WD-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018

ChevronTexaco
ELLE Sample #: WW 9850235
ELLE Group #: 1998078
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.	0.004	0.10	5
10335	Benzene	71-43-2	0.12	0.001	0.005	5
10335	Bromodichloromethane	75-27-4	N.D.	0.001	0.005	5
10335	Bromoform	75-25-2	N.D.	0.010	0.025	5
10335	Bromomethane	74-83-9	N.D.	0.003	0.005	5
10335	2-Butanone	78-93-3	N.D.	0.005	0.050	5
10335	Carbon Disulfide	75-15-0	N.D.	0.002	0.025	5
10335	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.005	5
10335	Chlorobenzene	108-90-7	N.D.	0.001	0.005	5
10335	Chloroethane	75-00-3	N.D.	0.002	0.005	5
10335	Chloroform	67-66-3	N.D.	0.001	0.005	5
10335	Chloromethane	74-87-3	N.D.	0.002	0.005	5
10335	Cyclohexane	110-82-7	0.097	0.010	0.025	5
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.005	0.025	5
10335	Dibromochloromethane	124-48-1	N.D.	0.002	0.005	5
10335	1,2-Dibromoethane	106-93-4	N.D.	0.002	0.005	5
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	0.025	5
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	0.025	5
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	0.025	5
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.002	0.005	5
10335	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.005	5
10335	1,2-Dichloroethane	107-06-2	N.D.	0.010	0.025	5
10335	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.005	5
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.005	5
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.005	5
10335	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.005	5
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.005	5
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.005	5
10335	Ethylbenzene	100-41-4	0.86	0.001	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
10335	Isopropylbenzene	98-82-8	0.044	0.002	0.025	5
10335	Methyl Acetate	79-20-9	N.D.	0.003	0.025	5
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.001	0.005	5
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.050	5
10335	Methylcyclohexane	108-87-2	0.064	0.001	0.025	5
10335	Methylene Chloride	75-09-2	0.011	0.001	0.005	5
10335	Styrene	100-42-5	N.D.	0.001	0.025	5
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.005	5
10335	Tetrachloroethene	127-18-4	N.D.	0.001	0.005	5
10335	Toluene	108-88-3	0.53	0.001	0.005	5

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

Sample Description: **DUP-1-WD-181010 Grab Groundwater**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018

ChevronTexaco
ELLE Sample #: WW 9850235
ELLE Group #: 1998078
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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.002	0.025	5
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.005	5
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.005	5
10335	Trichloroethene	79-01-6	N.D.	0.001	0.005	5
10335	Trichlorofluoromethane	75-69-4	N.D.	0.002	0.005	5
10335	Vinyl Chloride	75-01-4	N.D.	0.002	0.005	5
10335	Xylene (Total)	1330-20-7	5.5	0.025	0.25	50

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the TNI/DoD Standards. The following analytes are accepted based on this allowance: chloromethane.

GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	19	0.14	1.0	10
GC Petroleum Hydrocarbons	**AK 102-SV 4/8/02**		**mg/l**	**mg/l**	**mg/l**	
13025	DRO C10-C25	n.a.	3.2	0.052	0.26	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 17:30	Angela D Sneeringer	5
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182971AA	10/24/2018 17:53	Angela D Sneeringer	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182971AA	10/24/2018 17:30	Angela D Sneeringer	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	4182971AA	10/24/2018 17:53	Angela D Sneeringer	50
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/19/2018 04:48	Jeremy C Giffin	10
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/19/2018 04:48	Jeremy C Giffin	10
13025	AK 102-SV DRO	AK 102-SV 4/8/02	1	182910025A	10/22/2018 22:19	Heather E Williams	1
13027	Mini-Ext. AK 102-SV DRO	AK 102/AK 103 04/08/02	1	182910025A	10/19/2018 08:00	Logan M Brosemer	1

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

Sample Description: **QA-1-T-W-181010 NA Water**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018

ChevronTexaco
ELLE Sample #: WW 9850236
ELLE Group #: 1998078
Matrix: Water

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.	0.0008	0.020	1
10335	Benzene	71-43-2	N.D.	0.0002	0.001	1
10335	Bromodichloromethane	75-27-4	N.D.	0.0002	0.001	1
10335	Bromoform	75-25-2	N.D.	0.002	0.005	1
10335	Bromomethane	74-83-9	N.D.	0.0005	0.001	1
10335	2-Butanone	78-93-3	N.D.	0.001	0.010	1
10335	Carbon Disulfide	75-15-0	N.D.	0.0003	0.005	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.0002	0.001	1
10335	Chlorobenzene	108-90-7	N.D.	0.0002	0.001	1
10335	Chloroethane	75-00-3	N.D.	0.0003	0.001	1
10335	Chloroform	67-66-3	N.D.	0.0002	0.001	1
10335	Chloromethane	74-87-3	N.D.	0.0003	0.001	1
10335	Cyclohexane	110-82-7	N.D.	0.002	0.005	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.001	0.005	1
10335	Dibromochloromethane	124-48-1	N.D.	0.0004	0.001	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.0003	0.001	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	0.0002	0.005	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	0.0002	0.005	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	0.0002	0.005	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.0003	0.001	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.0002	0.001	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.002	0.005	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.0002	0.001	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0002	0.001	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0002	0.001	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.0002	0.001	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.0002	0.001	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.0002	0.001	1
10335	Ethylbenzene	100-41-4	N.D.	0.0002	0.001	1
10335	Freon 113	76-13-1	N.D.	0.002	0.010	1
10335	2-Hexanone	591-78-6	N.D.	0.003	0.010	1
10335	Isopropylbenzene	98-82-8	N.D.	0.0003	0.005	1
10335	Methyl Acetate	79-20-9	N.D.	0.0006	0.005	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0002	0.001	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	0.0005	0.010	1
10335	Methylcyclohexane	108-87-2	N.D.	0.0002	0.005	1
10335	Methylene Chloride	75-09-2	N.D.	0.0002	0.001	1
10335	Styrene	100-42-5	N.D.	0.0002	0.005	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.0002	0.001	1
10335	Tetrachloroethene	127-18-4	N.D.	0.0002	0.001	1
10335	Toluene	108-88-3	N.D.	0.0002	0.001	1

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

Sample Description: **QA-1-T-W-181010 NA Water**
Facility# 306448
1441 C Street - Anchorage, AK

Project Name: **306448**

Submittal Date/Time: 10/12/2018 10:20
Collection Date/Time: 10/10/2018

ChevronTexaco
ELLE Sample #: **WW 9850236**
ELLE Group #: **1998078**
Matrix: Water

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	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.0004	0.005	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.0002	0.001	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.0002	0.001	1
10335	Trichloroethene	79-01-6	N.D.	0.0002	0.001	1
10335	Trichlorofluoromethane	75-69-4	N.D.	0.0004	0.001	1
10335	Vinyl Chloride	75-01-4	N.D.	0.0004	0.001	1
10335	Xylene (Total)	1330-20-7	N.D.	0.0005	0.005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	**mg/l**	
01438	TPH-GRO AK water C6-C10	n.a.	N.D.	0.014	0.10	1

Sample Comments

State of Alaska Lab Certification No. UST-061

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	TCL 4.3 VOCs	SW-846 8260B	1	4182961AA	10/23/2018 13:01	Corie Mellinger	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	4182961AA	10/23/2018 13:01	Corie Mellinger	1
01438	TPH-GRO AK water C6-C10	AK 101	1	18291A94A	10/18/2018 19:51	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18291A94A	10/18/2018 19:51	Jeremy C Giffin	1

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

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Quality Control Summary

Client Name: ChevronTexaco
Group Number: 1998078
Reported: 10/26/2018 10:48

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: 4182961AA	Sample number(s): 9850229-9850231,9850236		
Acetone	N.D.	0.0008	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.002	0.005
Bromomethane	N.D.	0.0005	0.001
2-Butanone	N.D.	0.001	0.010
Carbon Disulfide	N.D.	0.0003	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0003	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0003	0.001
Cyclohexane	N.D.	0.002	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.001	0.005
Dibromochloromethane	N.D.	0.0004	0.001
1,2-Dibromoethane	N.D.	0.0003	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0003	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.002	0.005
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Freon 113	N.D.	0.002	0.010
2-Hexanone	N.D.	0.003	0.010
Isopropylbenzene	N.D.	0.0003	0.005
Methyl Acetate	N.D.	0.0006	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001
4-Methyl-2-pentanone	N.D.	0.0005	0.010
Methylcyclohexane	N.D.	0.0002	0.005
Methylene Chloride	N.D.	0.0002	0.001
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,2,4-Trichlorobenzene	N.D.	0.0004	0.005
1,1,1-Trichloroethane	N.D.	0.0002	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0004	0.001
Vinyl Chloride	N.D.	0.0004	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: 4182971AA	Sample number(s): 9850232-9850235		
Acetone	N.D.	0.0008	0.020
Benzene	N.D.	0.0002	0.001
Bromodichloromethane	N.D.	0.0002	0.001
Bromoform	N.D.	0.002	0.005
Bromomethane	N.D.	0.0005	0.001
2-Butanone	N.D.	0.001	0.010
Carbon Disulfide	N.D.	0.0003	0.005
Carbon Tetrachloride	N.D.	0.0002	0.001
Chlorobenzene	N.D.	0.0002	0.001
Chloroethane	N.D.	0.0003	0.001
Chloroform	N.D.	0.0002	0.001
Chloromethane	N.D.	0.0003	0.001
Cyclohexane	N.D.	0.002	0.005
1,2-Dibromo-3-chloropropane	N.D.	0.001	0.005
Dibromochloromethane	N.D.	0.0004	0.001
1,2-Dibromoethane	N.D.	0.0003	0.001
1,2-Dichlorobenzene	N.D.	0.0002	0.005
1,3-Dichlorobenzene	N.D.	0.0002	0.005
1,4-Dichlorobenzene	N.D.	0.0002	0.005
Dichlorodifluoromethane	N.D.	0.0003	0.001
1,1-Dichloroethane	N.D.	0.0002	0.001
1,2-Dichloroethane	N.D.	0.002	0.005
1,1-Dichloroethene	N.D.	0.0002	0.001
cis-1,2-Dichloroethene	N.D.	0.0002	0.001
trans-1,2-Dichloroethene	N.D.	0.0002	0.001
1,2-Dichloropropane	N.D.	0.0002	0.001
cis-1,3-Dichloropropene	N.D.	0.0002	0.001
trans-1,3-Dichloropropene	N.D.	0.0002	0.001
Ethylbenzene	N.D.	0.0002	0.001
Freon 113	N.D.	0.002	0.010
2-Hexanone	N.D.	0.003	0.010
Isopropylbenzene	N.D.	0.0003	0.005
Methyl Acetate	N.D.	0.0006	0.005
Methyl Tertiary Butyl Ether	N.D.	0.0002	0.001

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

Method Blank (continued)

Analysis Name	Result	MDL**	LOQ
	mg/l	mg/l	mg/l
4-Methyl-2-pentanone	N.D.	0.0005	0.010
Methylcyclohexane	N.D.	0.0002	0.005
Methylene Chloride	N.D.	0.0002	0.001
Styrene	N.D.	0.0002	0.005
1,1,2,2-Tetrachloroethane	N.D.	0.0002	0.001
Tetrachloroethene	N.D.	0.0002	0.001
Toluene	N.D.	0.0002	0.001
1,2,4-Trichlorobenzene	N.D.	0.0004	0.005
1,1,1-Trichloroethane	N.D.	0.0002	0.001
1,1,2-Trichloroethane	N.D.	0.0002	0.001
Trichloroethene	N.D.	0.0002	0.001
Trichlorofluoromethane	N.D.	0.0004	0.001
Vinyl Chloride	N.D.	0.0004	0.001
Xylene (Total)	N.D.	0.0005	0.005
Batch number: 18291A94A	Sample number(s): 9850229-9850236		
TPH-GRO AK water C6-C10	N.D.	0.014	0.10
Batch number: 182910025A	Sample number(s): 9850229-9850235		
DRO C10-C25	0.10 J	0.050	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: 4182961AA	Sample number(s): 9850229-9850231,9850236								
Acetone	0.150	0.148	0.150	0.153	99	102	54-157	3	30
Benzene	0.0200	0.0211	0.0200	0.0209	105	105	80-120	1	30
Bromodichloromethane	0.0200	0.0235	0.0200	0.0232	117	116	71-120	1	30
Bromoform	0.0200	0.0202	0.0200	0.0194	101	97	51-120	4	30
Bromomethane	0.0200	0.0194	0.0200	0.0182	97	91	53-128	7	30
2-Butanone	0.150	0.119	0.150	0.114	79	76	59-135	5	30
Carbon Disulfide	0.0200	0.0194	0.0200	0.0196	97	98	65-128	1	30
Carbon Tetrachloride	0.0200	0.0263	0.0200	0.0256	132	128	64-134	3	30
Chlorobenzene	0.0200	0.0222	0.0200	0.0217	111	109	80-120	2	30
Chloroethane	0.0200	0.0190	0.0200	0.0189	95	95	55-123	0	30
Chloroform	0.0200	0.0239	0.0200	0.0238	120	119	80-120	1	30
Chloromethane	0.0200	0.0154	0.0200	0.0160	77	80	56-121	4	30
Cyclohexane	0.0200	0.0183	0.0200	0.0186	91	93	68-126	2	30
1,2-Dibromo-3-chloropropane	0.0200	0.0196	0.0200	0.0188	98	94	47-131	4	30
Dibromochloromethane	0.0200	0.0222	0.0200	0.0218	111	109	71-120	2	30
1,2-Dibromoethane	0.0200	0.0211	0.0200	0.0205	106	102	77-120	3	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.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	0.0200	0.0217	0.0200	0.0213	108	107	80-120	2	30
1,3-Dichlorobenzene	0.0200	0.0212	0.0200	0.0208	106	104	80-120	2	30
1,4-Dichlorobenzene	0.0200	0.0215	0.0200	0.0208	107	104	80-120	3	30
Dichlorodifluoromethane	0.0200	0.0181	0.0200	0.0181	91	90	41-127	0	30
1,1-Dichloroethane	0.0200	0.0207	0.0200	0.0208	104	104	80-120	0	30
1,2-Dichloroethane	0.0200	0.0251	0.0200	0.0247	125*	123	73-124	1	30
1,1-Dichloroethene	0.0200	0.0244	0.0200	0.0241	122	120	80-131	1	30
cis-1,2-Dichloroethene	0.0200	0.0234	0.0200	0.0230	117	115	80-120	2	30
trans-1,2-Dichloroethene	0.0200	0.0236	0.0200	0.0230	118	115	80-120	3	30
1,2-Dichloropropane	0.0200	0.0200	0.0200	0.0192	100	96	80-120	4	30
cis-1,3-Dichloropropene	0.0200	0.0209	0.0200	0.0210	105	105	75-120	1	30
trans-1,3-Dichloropropene	0.0200	0.0198	0.0200	0.0200	99	100	67-120	1	30
Ethylbenzene	0.0200	0.0210	0.0200	0.0209	105	105	80-120	0	30
Freon 113	0.0200	0.0251	0.0200	0.0248	126	124	73-139	1	30
2-Hexanone	0.100	0.0818	0.100	0.0806	82	81	56-135	2	30
Isopropylbenzene	0.0200	0.0217	0.0200	0.0219	109	110	80-120	1	30
Methyl Acetate	0.0200	0.0160	0.0200	0.0177	80	89	54-136	10	30
Methyl Tertiary Butyl Ether	0.0200	0.0197	0.0200	0.0195	98	97	69-122	1	30
4-Methyl-2-pentanone	0.100	0.0860	0.100	0.0828	86	83	62-133	4	30
Methylcyclohexane	0.0200	0.0181	0.0200	0.0183	90	91	67-121	1	30
Methylene Chloride	0.0200	0.0219	0.0200	0.0220	110	110	80-120	1	30
Styrene	0.0200	0.0209	0.0200	0.0208	105	104	80-120	0	30
1,1,2,2-Tetrachloroethane	0.0200	0.0182	0.0200	0.0179	91	90	72-120	2	30
Tetrachloroethene	0.0200	0.0204	0.0200	0.0203	102	101	80-120	0	30
Toluene	0.0200	0.0209	0.0200	0.0207	105	103	80-120	1	30
1,2,4-Trichlorobenzene	0.0200	0.0185	0.0200	0.0186	93	93	63-120	1	30
1,1,1-Trichloroethane	0.0200	0.0258	0.0200	0.0252	129*	126	67-126	2	30
1,1,2-Trichloroethane	0.0200	0.0211	0.0200	0.0208	105	104	80-120	1	30
Trichloroethene	0.0200	0.0231	0.0200	0.0224	115	112	80-120	3	30
Trichlorofluoromethane	0.0200	0.0227	0.0200	0.0218	114	109	55-135	4	30
Vinyl Chloride	0.0200	0.0179	0.0200	0.0183	90	92	56-120	2	30
Xylene (Total)	0.0600	0.0662	0.0600	0.0645	110	107	80-120	3	30
Batch number: 4182971AA	Sample number(s): 9850232-9850235								
Acetone	0.150	0.115			77		54-157		
Benzene	0.0200	0.0203			102		80-120		
Bromodichloromethane	0.0200	0.0230			115		71-120		
Bromoform	0.0200	0.0198			99		51-120		
Bromomethane	0.0200	0.0151			75		53-128		
2-Butanone	0.150	0.105			70		59-135		
Carbon Disulfide	0.0200	0.0187			93		65-128		
Carbon Tetrachloride	0.0200	0.0263			132		64-134		
Chlorobenzene	0.0200	0.0211			106		80-120		
Chloroethane	0.0200	0.0153			77		55-123		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

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
Chloroform	0.0200	0.0233			117		80-120		
Chloromethane	0.0200	0.00958			48*		56-121		
Cyclohexane	0.0200	0.0185			92		68-126		
1,2-Dibromo-3-chloropropane	0.0200	0.0190			95		47-131		
Dibromochloromethane	0.0200	0.0218			109		71-120		
1,2-Dibromoethane	0.0200	0.0200			100		77-120		
1,2-Dichlorobenzene	0.0200	0.0208			104		80-120		
1,3-Dichlorobenzene	0.0200	0.0207			104		80-120		
1,4-Dichlorobenzene	0.0200	0.0203			101		80-120		
Dichlorodifluoromethane	0.0200	0.0105			52		41-127		
1,1-Dichloroethane	0.0200	0.0197			99		80-120		
1,2-Dichloroethane	0.0200	0.0244			122		73-124		
1,1-Dichloroethene	0.0200	0.0231			116		80-131		
cis-1,2-Dichloroethene	0.0200	0.0227			113		80-120		
trans-1,2-Dichloroethene	0.0200	0.0226			113		80-120		
1,2-Dichloropropane	0.0200	0.0184			92		80-120		
cis-1,3-Dichloropropene	0.0200	0.0211			106		75-120		
trans-1,3-Dichloropropene	0.0200	0.0194			97		67-120		
Ethylbenzene	0.0200	0.0203			101		80-120		
Freon 113	0.0200	0.0242			121		73-139		
2-Hexanone	0.100	0.0727			73		56-135		
Isopropylbenzene	0.0200	0.0209			105		80-120		
Methyl Acetate	0.0200	0.0149			74		54-136		
Methyl Tertiary Butyl Ether	0.0200	0.0188			94		69-122		
4-Methyl-2-pentanone	0.100	0.0824			82		62-133		
Methylcyclohexane	0.0200	0.0173			87		67-121		
Methylene Chloride	0.0200	0.0211			106		80-120		
Styrene	0.0200	0.0203			101		80-120		
1,1,2,2-Tetrachloroethane	0.0200	0.0170			85		72-120		
Tetrachloroethene	0.0200	0.0202			101		80-120		
Toluene	0.0200	0.0200			100		80-120		
1,2,4-Trichlorobenzene	0.0200	0.0181			90		63-120		
1,1,1-Trichloroethane	0.0200	0.0252			126		67-126		
1,1,2-Trichloroethane	0.0200	0.0202			101		80-120		
Trichloroethene	0.0200	0.0226			113		80-120		
Trichlorofluoromethane	0.0200	0.0184			92		55-135		
Vinyl Chloride	0.0200	0.0125			62		56-120		
Xylene (Total)	0.0600	0.0632			105		80-120		
	mg/l	**mg/l**	**mg/l**	**mg/l**					
Batch number: 18291A94A	Sample number(s): 9850229-9850236								
TPH-GRO AK water C6-C10	1.10	1.13	1.10	1.13	102	103	60-120	0	20
	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.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

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: 182910025A	Sample number(s): 9850229-9850235								
DRO C10-C25	4.01	4.28	4.01	4.39	107	109	75-125	2	20

MS/MSD

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

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 4182971AA	Sample number(s): 9850232-9850235 UNSPK: 9850232									
Acetone	N.D.	0.150	0.130	0.150	0.132	86	88	54-157	2	30
Benzene	N.D.	0.0200	0.0235	0.0200	0.0238	117	119	80-120	1	30
Bromodichloromethane	N.D.	0.0200	0.0258	0.0200	0.0260	129*	130*	71-120	1	30
Bromoform	N.D.	0.0200	0.0208	0.0200	0.0207	104	103	51-120	0	30
Bromomethane	N.D.	0.0200	0.0172	0.0200	0.0172	86	86	53-128	0	30
2-Butanone	N.D.	0.150	0.122	0.150	0.124	82	83	59-135	1	30
Carbon Disulfide	N.D.	0.0200	0.0216	0.0200	0.0223	108	111	65-128	3	30
Carbon Tetrachloride	N.D.	0.0200	0.0315	0.0200	0.0314	158*	157*	64-134	0	30
Chlorobenzene	N.D.	0.0200	0.0237	0.0200	0.0246	118	123*	80-120	4	30
Chloroethane	N.D.	0.0200	0.0178	0.0200	0.0184	89	92	55-123	4	30
Chloroform	N.D.	0.0200	0.0265	0.0200	0.0266	132*	133*	80-120	1	30
Chloromethane	N.D.	0.0200	0.0115	0.0200	0.0125	58	62	56-121	8	30
Cyclohexane	N.D.	0.0200	0.0225	0.0200	0.0233	112	116	68-126	4	30
1,2-Dibromo-3-chloropropane	N.D.	0.0200	0.0200	0.0200	0.0201	100	100	47-131	0	30
Dibromochloromethane	N.D.	0.0200	0.0237	0.0200	0.0234	119	117	71-120	1	30
1,2-Dibromoethane	N.D.	0.0200	0.0216	0.0200	0.0217	108	109	77-120	1	30
1,2-Dichlorobenzene	N.D.	0.0200	0.0228	0.0200	0.0233	114	116	80-120	2	30
1,3-Dichlorobenzene	N.D.	0.0200	0.0225	0.0200	0.0233	112	116	80-120	3	30
1,4-Dichlorobenzene	N.D.	0.0200	0.0229	0.0200	0.0229	114	114	80-120	0	30
Dichlorodifluoromethane	0.00258	0.0200	0.0147	0.0200	0.0154	61	64	41-127	4	30
1,1-Dichloroethane	N.D.	0.0200	0.0230	0.0200	0.0233	115	116	80-120	1	30
1,2-Dichloroethane	N.D.	0.0200	0.0267	0.0200	0.0265	134*	133*	73-124	1	30
1,1-Dichloroethene	N.D.	0.0200	0.0282	0.0200	0.0286	141*	143*	80-131	1	30
cis-1,2-Dichloroethene	N.D.	0.0200	0.0258	0.0200	0.0258	129*	129*	80-120	0	30
trans-1,2-Dichloroethene	N.D.	0.0200	0.0265	0.0200	0.0265	133*	132*	80-120	0	30
1,2-Dichloropropane	N.D.	0.0200	0.0210	0.0200	0.0218	105	109	80-120	3	30
cis-1,3-Dichloropropene	N.D.	0.0200	0.0211	0.0200	0.0221	106	111	75-120	5	30
trans-1,3-Dichloropropene	N.D.	0.0200	0.0212	0.0200	0.0218	106	109	67-120	3	30
Ethylbenzene	N.D.	0.0200	0.0233	0.0200	0.0240	117	120	80-120	3	30
Freon 113	N.D.	0.0200	0.0310	0.0200	0.0315	155*	157*	73-139	1	30
2-Hexanone	N.D.	0.100	0.0831	0.100	0.0843	83	84	56-135	1	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

MS/MSD (continued)

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

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Isopropylbenzene	N.D.	0.0200	0.0245	0.0200	0.0251	122*	125*	80-120	3	30
Methyl Acetate	N.D.	0.0200	0.0160	0.0200	0.0159	80	80	54-136	1	30
Methyl Tertiary Butyl Ether	N.D.	0.0200	0.0204	0.0200	0.0209	102	105	69-122	3	30
4-Methyl-2-pentanone	N.D.	0.100	0.0874	0.100	0.0876	87	88	62-133	0	30
Methylcyclohexane	N.D.	0.0200	0.0219	0.0200	0.0229	109	115	67-121	5	30
Methylene Chloride	N.D.	0.0200	0.0234	0.0200	0.0244	117	122*	80-120	4	30
Styrene	N.D.	0.0200	0.0226	0.0200	0.0233	113	116	80-120	3	30
1,1,2,2-Tetrachloroethane	N.D.	0.0200	0.0185	0.0200	0.0185	92	93	72-120	0	30
Tetrachloroethene	N.D.	0.0200	0.0231	0.0200	0.0236	116	118	80-120	2	30
Toluene	N.D.	0.0200	0.0226	0.0200	0.0234	113	117	80-120	4	30
1,2,4-Trichlorobenzene	N.D.	0.0200	0.0199	0.0200	0.0206	99	103	63-120	4	30
1,1,1-Trichloroethane	N.D.	0.0200	0.0303	0.0200	0.0300	152*	150*	67-126	1	30
1,1,2-Trichloroethane	N.D.	0.0200	0.0222	0.0200	0.0224	111	112	80-120	1	30
Trichloroethene	N.D.	0.0200	0.0261	0.0200	0.0259	131*	129*	80-120	1	30
Trichlorofluoromethane	N.D.	0.0200	0.0237	0.0200	0.0236	119	118	55-135	0	30
Vinyl Chloride	N.D.	0.0200	0.0152	0.0200	0.0162	76	81	56-120	6	30
Xylene (Total)	N.D.	0.0600	0.0711	0.0600	0.0729	119	122*	80-120	2	30

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: 4182961AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9850229	115	107	95	94
9850230	115	108	94	94
9850231	117	109	93	92
9850236	115	104	94	93
Blank	116	111	95	95
LCS	109	102	98	104
LCSD	109	106	98	103
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TCL 4.3 VOCs
Batch number: 4182971AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9850232	119	107	94	92

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

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: TCL 4.3 VOCs
Batch number: 4182971AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9850233	106	105	95	105
9850234	108	102	97	104
9850235	107	101	95	105
Blank	117	108	94	91
LCS	110	108	97	102
MS	110	103	95	102
MSD	109	103	96	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 18291A94A

	Trifluorotoluene-F
9850229	85
9850230	89
9850231	75
9850232	87
9850233	71
9850234	77
9850235	77
9850236	85
Blank	88
LCS	91
LCSD	93
Limits:	60-120

Analysis Name: AK 102-SV DRO
Batch number: 182910025A

	Orthoterphenyl
9850229	101
9850230	91
9850231	92
9850232	99
9850233	99
9850234	60
9850235	53
Limits:	50-150

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 10/26/2018 10:48

Group Number: 1998078

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: 182910025A

	Orthoterphenyl
Blank	94
LCS	102
LCSD	99
Limits:	60-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron Generic Analysis Request/Chain of Custody

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Acct. # 10880 For Eurofins Lancaster Laboratories use only Group # 1998078 Sample # 4850229-36

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # CEMC 306448 WBS 06.02

Site Address 1441 C STREET, ANCHORAGE, AK

Chevron PM ERIC HETRICK Lead Consultant GHD

Consultant/Office 6610 SILVERADO WAY, STE A2, ANCHORAGE, AK

Consultant Project Mgr. SIOBHAN PRITCHARD

Consultant Phone # 970-222-3220

Sampler O. YAN & T. WEAVER

2 Sample Identification

Sample Identification	Collected Date	Collected Time	3 Grab	Composite	4 Matrix: Soil	Sediment	Water: Potable	Ground	NPDES	Surface	Oil	Air	Total Number of Containers	5 Analyses Requested: BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	TPH-GRO AK-101 8015	8260	TPH-DRO AK-102 Silica Gel Cleanup	Lead Total	Diss.	Method	VPH	EPH	Method
MW-21-W-181010	10/10/18	1015	X				X						8				X		X		X						
MW-22-W-181010	10/10/18	1109	X				X						8				X		X		X						
MW-23-W-181010	10/10/18	1205	X				X						8				X		X		X						
MW-19-W-181010	10/10/18	1336	X				X						8				X		X		X						
MW-11A-W-181010	10/10/18	1421	X				X						8				X		X		X						
MW-20-W-181010	10/10/18	1507	X				X						8				X		X		X						
DUP-1-W-181010	10/10/18	—	X				X						8				X		X		X						
QA-1-W-181010	—	—	—				—						2				X		X								

4 Matrix

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

5 Analyses Requested

BTEX + MTBE 8021 ☐ 8260 ☐ Naphth ☐

8260 full scan X

Oxygenates ____

TPH-GRO AK-101 8015 ☐ 8260 ☐

TPH-DRO AK-102 Silica Gel Cleanup ☐

Lead Total ☐ Diss. ☐ Method ____

VPH ☐ EPH ☐ Method ____

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

7 Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

8 Data Package (circle if required)

Type I - Full (Alaska/Type III)

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: ____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	10/11/18	1013			

9

Received by	Date	Time
[signature]	101218	1020

Relinquished by Commerical Carrier: UPS ____ FedEx ✓ Other ____

Temperature Upon Receipt 1.2 °C

Custody Seals Intact? (Yes) No

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Sample Administration Receipt Documentation Log

Doc Log ID: 229908

Group Number(s): 1998078

Client: CEMC

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/12/2018 10:20
Number of Packages:	1	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:	Yes
Samples Chilled:	Yes	VOA IDs (≥ 6mm):	See Below
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace ≥ 6mm): Trip blanks (2 HCl vials)

Unpacked by Wanita Curry (14057) at 15:50 on 10/12/2018

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	DT42-01	1.2	DT	Wet	Y	Bagged	N

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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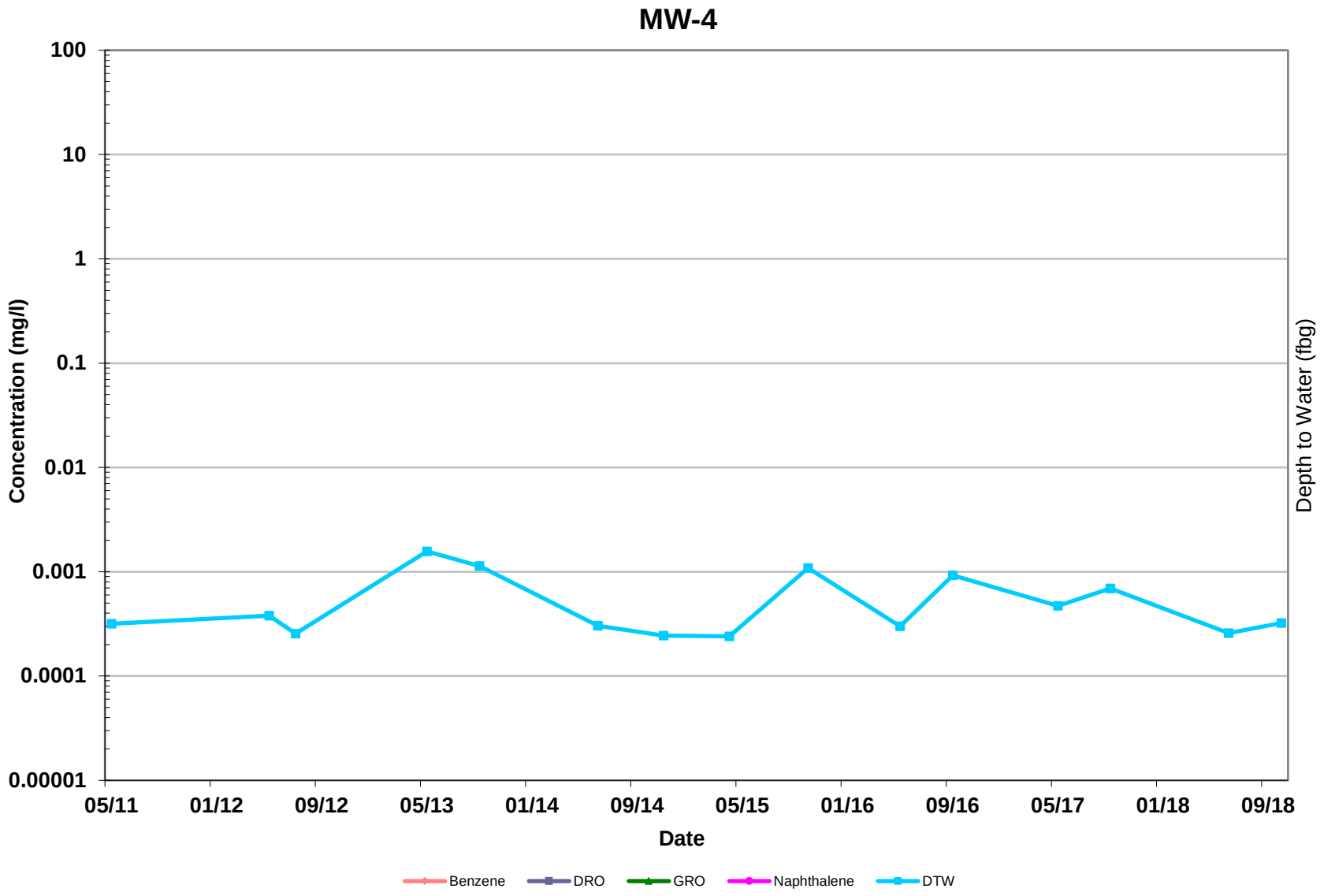
Data Qualifiers

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.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

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

Appendix E
Petroleum Hydrocarbon Concentration Graphs



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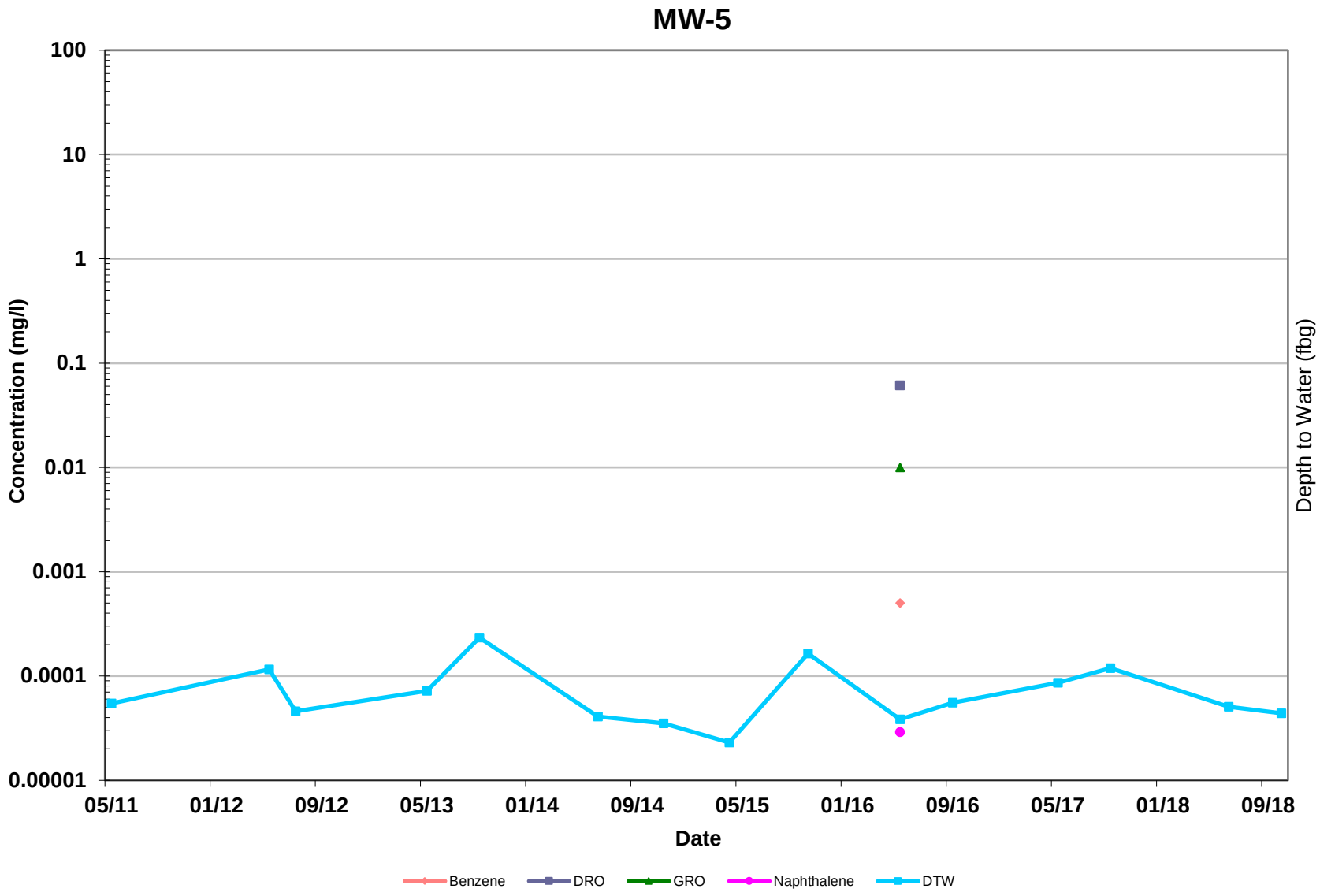
1441 C Street
Anchorage, Alaska



Former Unocal Station 4652/ Chevron 306448
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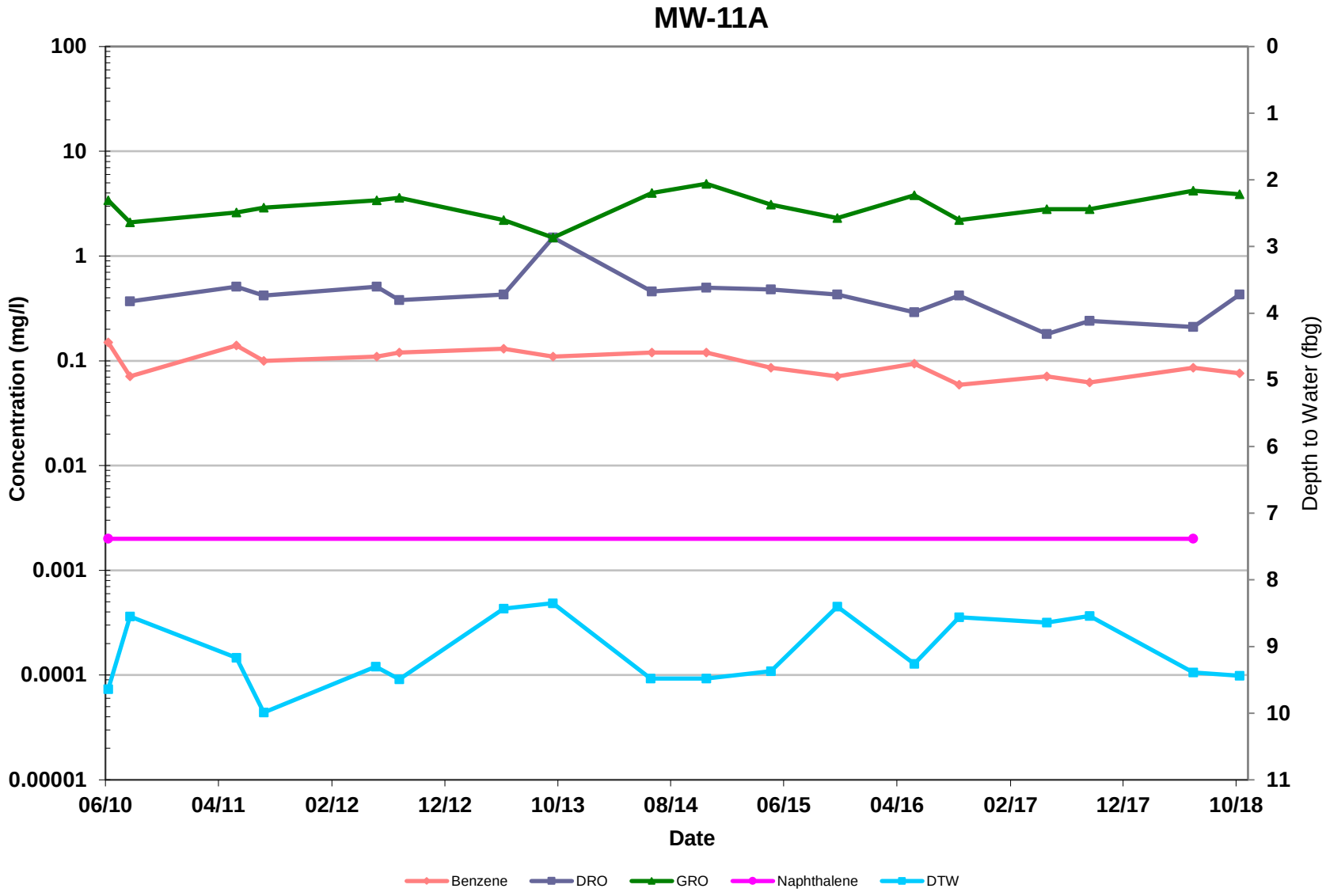
Anchorage, Alaska



GHD

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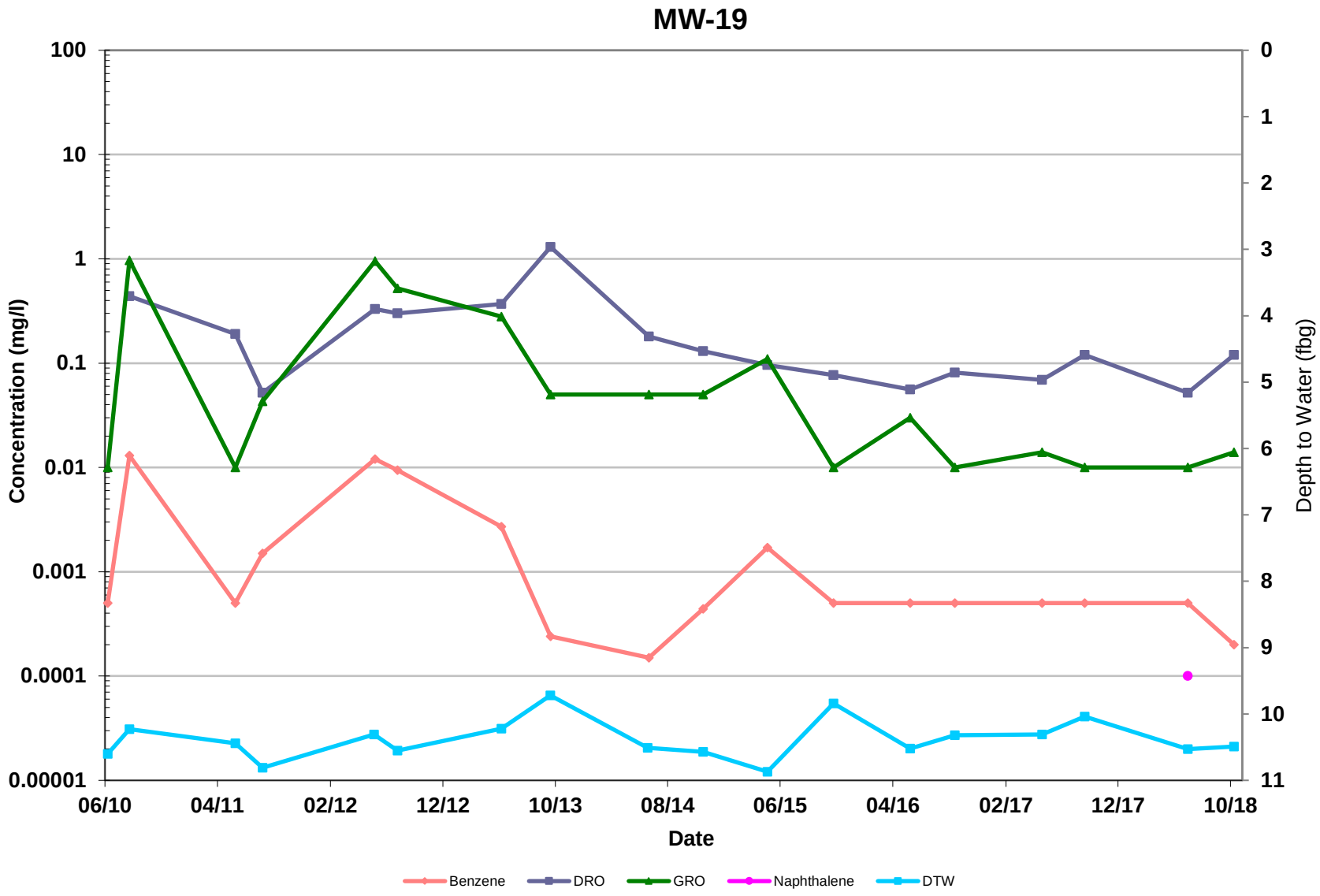
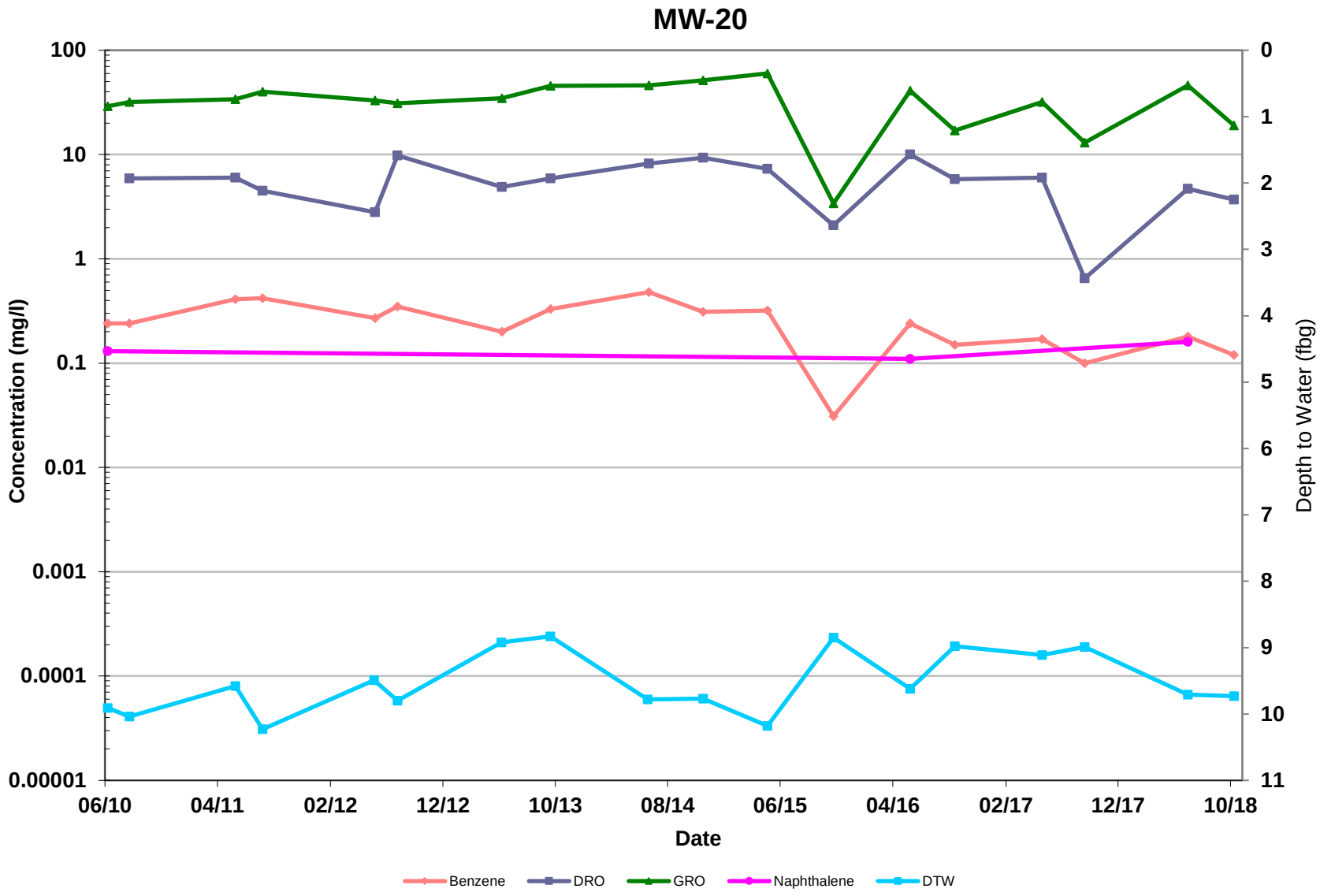
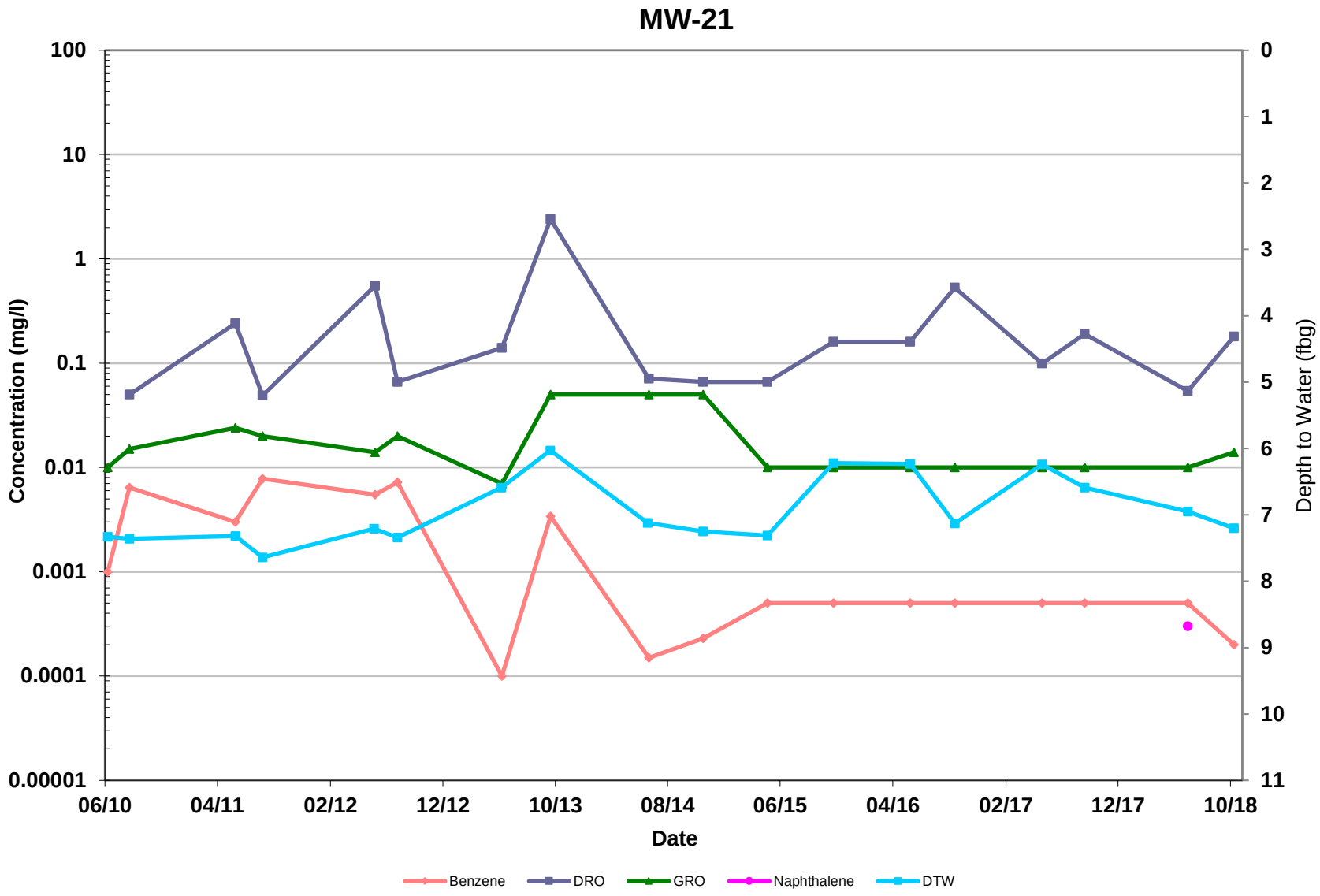
1441 C Street
Anchorage, Alaska



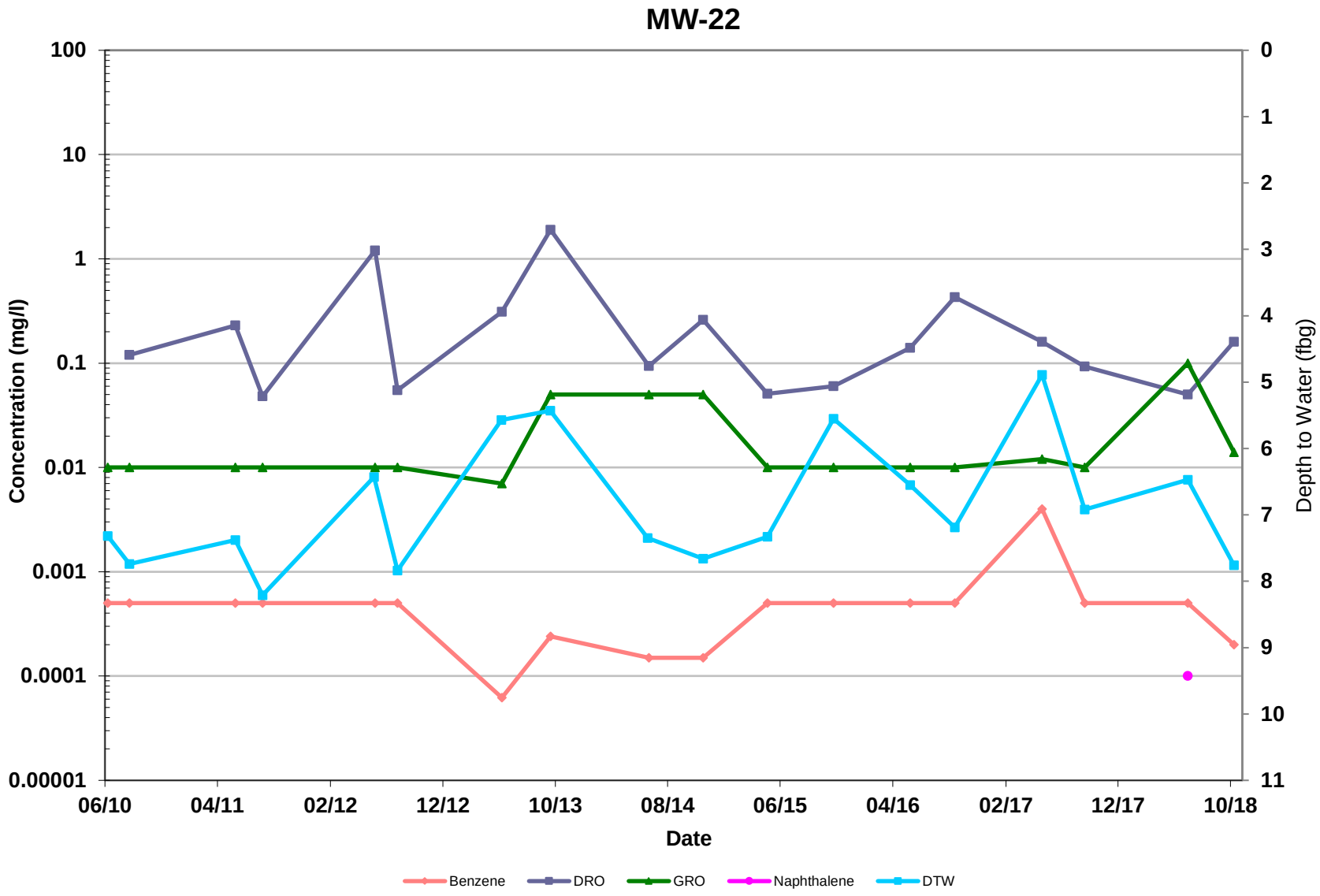
Former Unocal Station 4652/ Chevron 306448
1441 C Street
Anchorage, Alaska



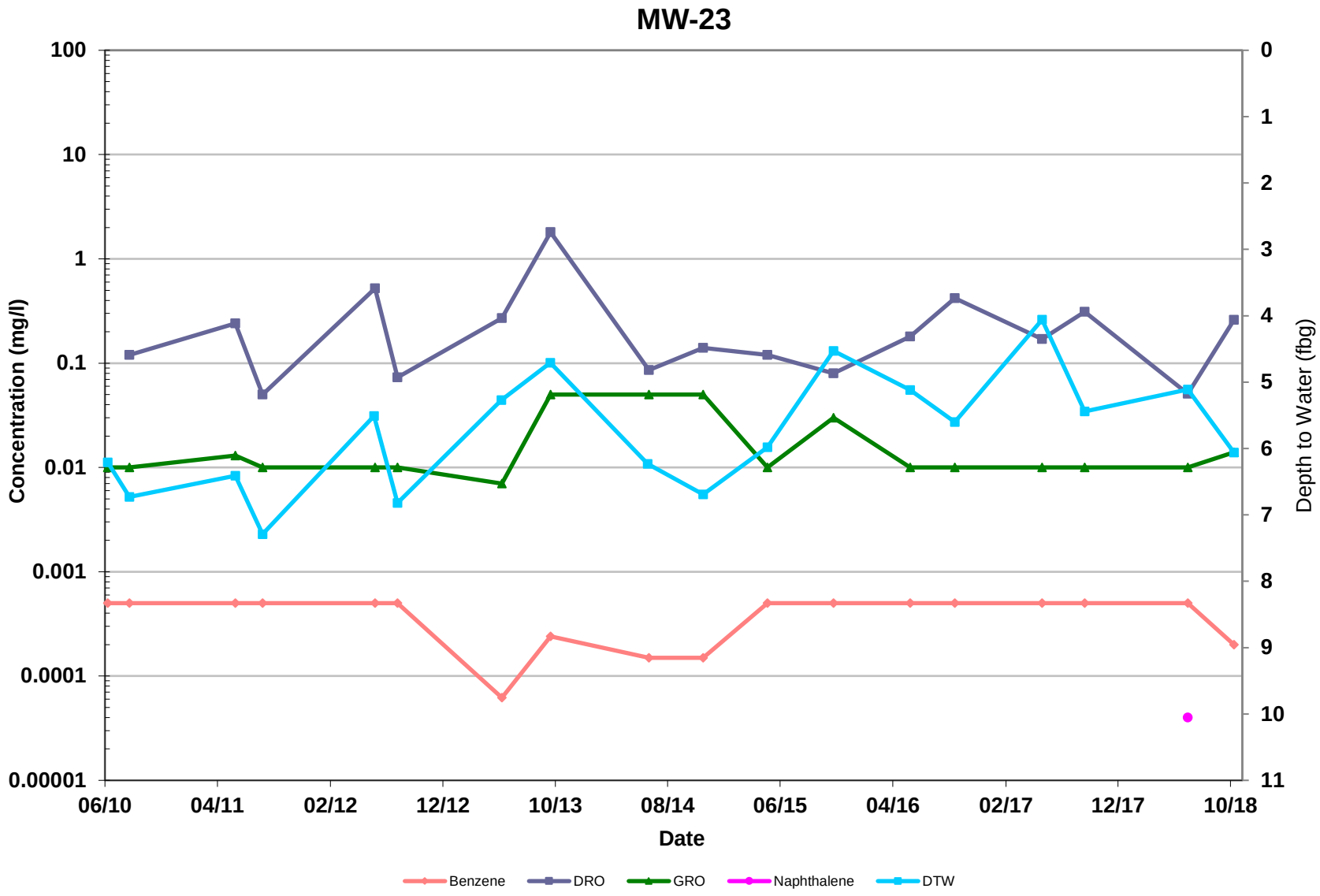
Former Unocal Station 4652/ Chevron 306448
1441 C Street
Anchorage, Alaska



Former Unocal Station 4652/ Chevron 306448
1441 C Street
Anchorage, Alaska



Former Unocal Station 4652/ Chevron 306448
1441 C Street
Anchorage, Alaska



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1441 C Street
Anchorage, Alaska

Appendix F
ADEC Laboratory Data Review Checklist and Memorandum

Laboratory Data Review Checklist

Completed by:

J Cloud

Title:

Project Chemist

Date:

November 07, 2018

CS Report Name:

Second Semiannual 2018 Groundwater Monitoring Report

Report Date:

October 26, 2018

Consultant Firm:

GHD Services Inc.

Laboratory Name:

Eurofins Lancaster Laboratories Environmental

Laboratory Report Number:

1998078

ADEC File Number:

2100.26.117

Hazard Identification Number:

23360

1. Laboratory

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

      (•) Yes ( ) No Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

      ( ) Yes (•) No Comments:

      Samples not transferred

2. Chain of Custody (COC)

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

      (•) Yes ( ) No Comments:

   b. Correct analyses requested?

      (•) Yes ( ) No Comments:

3. Laboratory Sample Receipt Documentation

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

      (•) Yes ( ) No Comments:

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

      (•) Yes ( ) No Comments:

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

      (•) Yes ( ) No Comments:

   d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

      ( ) Yes (•) No Comments:

      No discrepancies

e. Data quality or usability affected?

Comments:

None

4. Case Narrative

a. Present and understandable?

(•) Yes ( ) No Comments:

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

(•) Yes ( ) No Comments:

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:

The method AK102 method blank had a DRO detection

iii. If above LOQ, what samples are affected?

Comments:

MW-19, MW-21 and MW-22

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

(•) Yes ( ) No Comments:

v. Data quality or usability affected?

Comments:

The DRO results for samples MW-19, MW-21 and MW-22 were qualified as non-detect due to contamination as evidenced by the blank

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:

Several recoveries were outside of the acceptable limits

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-11A, MW-19, MW-20 and DUP-1

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:

Where high recoveries found the associated sample results were non-detect and were not impacted. The chloromethane results for samples MW-11A, MW-19, MW-20 and DUP-1 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:

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

○ Yes ◉ No Comments:

No failed surrogates

iv. Data quality or usability affected?

Comments:

None

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

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

(•) Yes ( ) No Comments:

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

( ) Yes ( ) No Comments:

iii. All results less than LOQ?

(•) Yes ( ) No Comments:

iv. If above LOQ, what samples are affected?

Comments:

No affected samples

v. Data quality or usability affected?

Comments:

None

e. Field Duplicate

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

(•) Yes ( ) No Comments:

ii. Submitted blind to lab?

(•) Yes ( ) No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

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:

Methylene chloride had a high RPD

iv. Data quality or usability affected?

Comments:

The methylene chloride results for samples MW-20 and DUP-1 were qualified as estimated due to variability

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

November 12, 2018

To:	ADEC	Ref. No.:	621049
From:	Jeffrey Cloud	Tel:	206-914-3141
cc:	Siobhan Pritchard		

Subject: **QA/QC Review**
ChevronTexaco Site 306448
Job # 1998078
October 2018

1. Introduction

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

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

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

2. Sample Holding Time and Preservation

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

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

3. Laboratory Method Blank Analyses

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

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

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation with the exception of diesel range organics (DRO) present at a low concentration. The DRO results for samples MW-19, MW-21 and MW-22 were qualified as non-detect due to contamination as evidenced by the blank.

4. Surrogate Spike Recoveries

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

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

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

5. Laboratory Control Sample Analyses

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

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

The LCS and LCS/LCSD contained all analytes of interest. All LCS and LCS/LCSD recoveries and RPDs were within associated control limits, demonstrating acceptable analytical accuracy and precision (where applicable) with a few exceptions. Where high recoveries were found the associated sample results were non-detect and were not impacted. Where a low recovery was found the chloromethane results for samples MW-11A, MW-19, MW-20 and DUP-1 were qualified as estimated due to the implied low bias.

6. Matrix Spike/Matrix Spike Duplicate Analyses

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

The MS/MSD samples were spiked with the analytes of interest. All percent recoveries and RPD values were within the associated control limits, demonstrating acceptable analytical accuracy and precision with the exception of a few high recoveries. The associated sample results were non-detect and were not impacted. No qualification of the data was deemed necessary.

7. Field QA/QC Samples

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

Trip Blank Sample Analysis

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

Field Duplicate Sample Analysis

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

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision with the exception of one high methylene chloride RPD. The methylene chloride results for samples MW-20 and DUP-1 were qualified as estimated due to variability.

8. 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).

9. Conclusion

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