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Chevron Environmental Management Company

REVISED SITE CLOSURE REQUEST – VERSION 2

Chevron Service Station 306451
442 Gambell Street
Anchorage, Alaska

File Number: 2100.26.112
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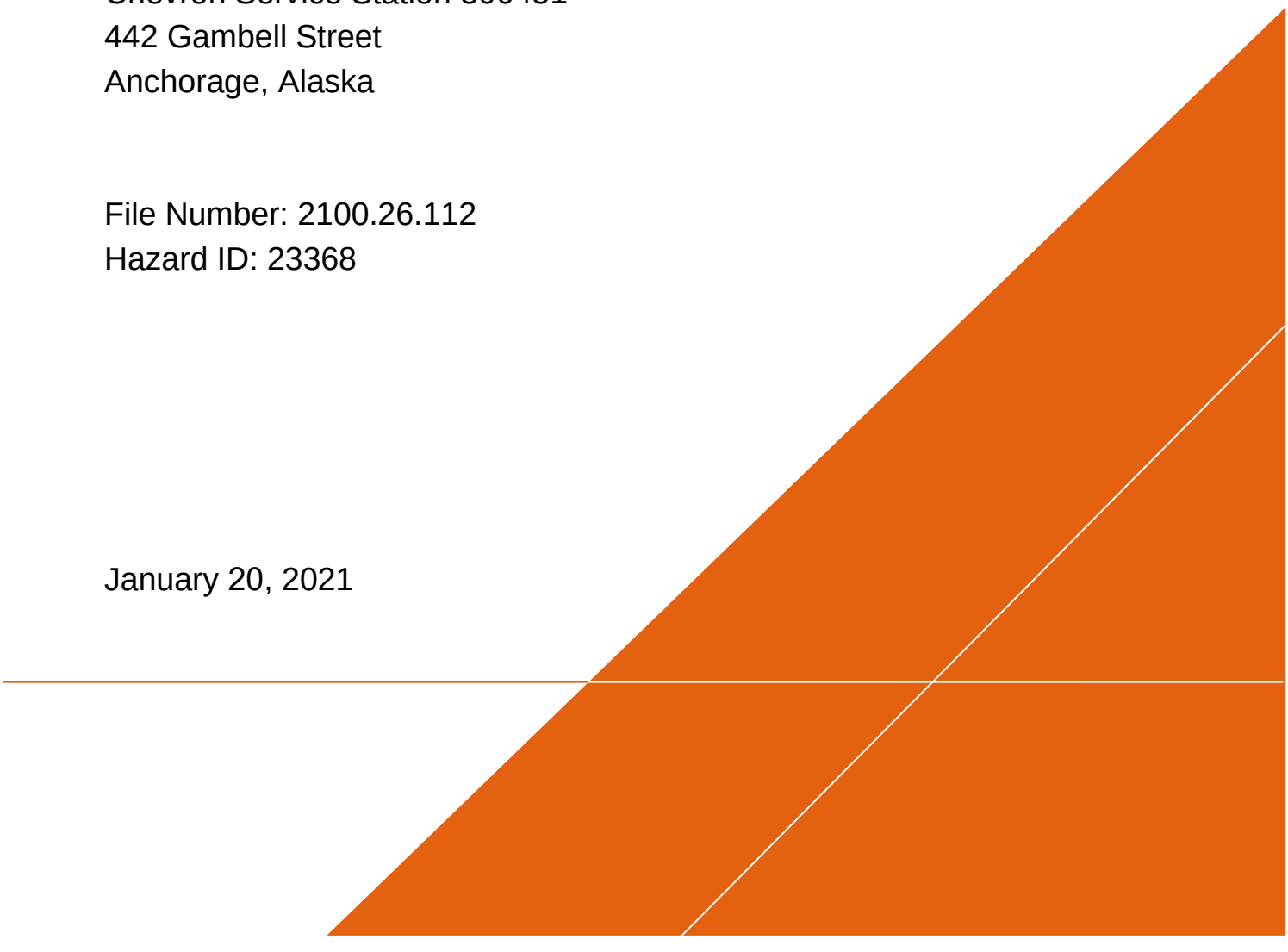
January 20, 2021



REVISED SITE CLOSURE REQUEST - VERSION 2

Chevron Service Station 306451
442 Gambell Street
Anchorage, Alaska

James K. O'Connell
Environmental Engineer

Max Elias
Project Manager

J. Russell Greisler
Senior Geologist

Prepared for:

Chevron Environmental Management Company

Prepared by:

Arcadis U.S., Inc.

111 SW Columbia Street

Suite 670

Portland

Oregon 97201

Tel 503 220 8201

Our Ref.:
30045551

Date:
January 20, 2021

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ACRONYMS AND ABBREVIATIONS

Arcadis	Arcadis U.S., Inc.
ADEC	Alaska Department of Environmental Conservation
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes

Chevron EMC	Chevron Environmental Management Company
CL	cleanup level
COPC	contaminant of potential concern
CSP	Contaminated Sites Program
DRO	diesel range organics
GCL	groundwater cleanup level
GRO	gasoline range organics
IC	institutional controls
LNAPL	light non-aqueous phase liquid
µg/L	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
TPH-g	Total petroleum hydrocarbons in gasoline-range
TPH-d	Total petroleum hydrocarbons in diesel-range
TPH-r	Total petroleum hydrocarbons in residual-range
PAHs	polynuclear aromatic hydrocarbons
RRO	residual range organics
SCL	soil cleanup level
USEPA	United States Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound

1 INTRODUCTION

On behalf of Chevron Environmental Management Company's (CEMC), Arcadis U.S., Inc. (Arcadis) has prepared this Spill Prevention And Response (SPAR) Contaminated Sites Program's (CSP) *Revised Site Closure Request* (Report) for the written approval of Cleanup Complete for the Chevron Service Station 306451 (the "site") located at 442 Gambell Street, Anchorage, Alaska; under Oil and Hazardous Substance Site Cleanup Rules (18 AAC 75.325 – 75.390) at the request of Alaska Department of Environmental Conservation (ADEC).

This report summarizes the site investigations, field activities, and remedial actions and presents an updated Conceptual Site Model (CSM) for the site. This report characterizes the site and demonstrates that the Contaminants of Concern (COC) concentrations remaining in site soils and groundwater pose no risk to human health or the environment.

All reporting has been completed in accordance with the following ADEC guidance documents and the applicable regulations in 18 AAC 75, Article 3:

- March 7, 2017 *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites,*
- September 2013 *Monitoring Well Guidance,* and

Field work and reporting were conducted by or under the supervision of a qualified environmental professional as defined in 18 Alaska Administrative Code [AAC] 75.333.

The site location map is included as Figure 1. The site features and former features are depicted on the site map included as Figure 2.

2 SITE BACKGROUND AND HISTORY

2.1 Site Description and Vicinity

The site is located at 442 Gambell Street in the city of Anchorage, Alaska (Figure 1). The property's legal description is East Addition Block 25B Lot 29A. Site latitude and longitude are 61.217788º north and 149.871383º west. Station facilities include a station building, office trailer, one three-chamber underground storage tank (UST), product dispensers and piping (Figure 2). Five groundwater monitoring wells (MW-1, MW-2, MW-3, MW-8 and MW-9) are scheduled to be decommissioned. Land use surrounding the site is primarily industrial and commercial. Commercial properties are located directly north, south, and east of the site.

2.2 Site History

The site is a former Union Oil of California (Unocal) #5580/Cline's Tesoro site (Chevron site 306451), located in Anchorage, Alaska. The site functioned as Unocal service station from 1966 to 1987. Soil and groundwater gasoline contamination were identified in a 1986 site investigation. In 1987, all former underground tanks were removed, and new tanks were installed. Those tanks were removed in 1998 and replaced with new tanks. Currently, the site is an active Tesoro branded service station. The site is comprised of a station building, office trailer, one three-chamber underground storage tank (UST), product dispensers and piping. (ADEC 2020)

In May 2019, ADEC requested a work plan for the decommissioning of the remaining monitoring wells (MW-1, MW-2, MW-3, MW-8 and MW-9) in line with the May 13th, 2019 correspondence with ADEC requesting a work plan. Arcadis submitted the *Work Plan for Well Abandonment* to ADEC on December 12th, 2019 (Arcadis 2019).

2.3 Regional Setting

The site is located within a commercial and industrial area of Anchorage, Alaska. The Knik Arm is located approximately 1.25 miles to the west of the site, and the Turnagain Arm is located approximately 9.25 miles to the south of the site. Anchorage is flanked by the Cook Inlet to the immediate west and Chugach State Park to the east.

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional and Site Geology

The bedrock in Anchorage is composed of Mesozoic metamorphic igneous units that are covered by densely consolidated sediments from the Kenai group. Marine transgressive sequences are combined with glaciofluvial sediments beneath the more recent glacial sediments typical of this region. The onsite sediments are composed primarily of silty sand and sand with gravel to approximately 31 feet below ground surface (bgs). This sediment is underlain by silty sand and sand to a total overserved depth of 45 feet bgs (GHD 2017).

3.2 Regional and Site Hydrogeology

The site is located within south central Alaska and due east of Cook Inlet. Ship Creek is approximately 0.25 miles across gradient of the site. Between 1998 and 2018, static groundwater depths have been observed between 31.83 and 38.07 feet below top of casing (btoc). On September 6, 2018, static groundwater depths ranged from 35.67 (MW-1) to 37.26 ft btoc (MW-8). Groundwater typically flows to the northeast (GHD 2018a).

4 SITE INVESTIGATIONS

4.1 Soil Investigations

In October 1986, RZA consultants conducted a UST site characterization/assessment. In January 1987, Unocal replaced all the USTs after a diesel storage tank did not pass a hydrostatic test. In 1998, Unocal replaced the USTs again. Contaminated soil and groundwater were found on site. Soil contamination levels were 2,300 milligrams per kilogram (mg/kg) total petroleum hydrocarbon for diesel range organics (TPH-d) and 7,100 mg/kg TPH for residual range organics (TPH-r) near the used oil tank; 8.2 mg/kg benzene; 2,110 mg/kg TPH for gasoline range (TPH-g); and 8,500 mg/kg DRO near the gasoline tanks and piping. (ADEC 2020)

In 2009, ADEC requested additional soil and groundwater characterization. In 2010, ADEC approved an assessment work plan to include the installation of monitoring wells at C-1 and C-7 (if soil contamination extends to groundwater at that location), and C-4 (if it extends to groundwater at that location but does not at C-7). Soil borings were installed at locations C-1, C-4, C-7, C-45, C-46, and C-48. Six soil borings were sampled; the results showed up to 0.028 mg/kg of benzene, 1.7 mg/kg GRO, 280 mg/kg residual range organics (RRO), and 31 mg/kg DRO in the locations sampled. polynuclear aromatic hydrocarbons (PAH), solvent, and PCB soil samples all met the migration to groundwater cleanup levels defined in 18 ACC 75.341, Table B1 – Method 2 – Soil Cleanup Levels. One sample was found above cleanup levels was at 12 feet below groundwater surface (bgs) at C-10 (CB10-4) (0.028 mg/kg benzene). (ADEC 2020)

Confirmation soil samples were collected from soil borings in August 8, 2010 and September 19, 2011. Up to 0.028 mg/kg benzene remains in the areas sampled. Up to 2.43 mg/kg benzene, 18.5 mg/kg GRO, and 46.4 mg/kg DRO was in the former used oil tank area (MW-5 soil samples) with 2.43 mg/kg benzene

at 34 feet below ground surface (bgs) and 0.621 mg/kg benzene at 12.5 feet bgs. There is also 0.08 mg/kg benzene in the former 4,000-gallon tank location (C11) at 10 feet bgs. An additional four soil borings were sampled in April 30, 2014 with up to 66 mg/kg DRO, 0.13 mg/kg naphthalene, and 0.34 mg/kg benzene in the soil samples collected. (GHD 2018b)

On May 29 to 30, 2018 three soil borings were sampled and analyzed for DRO, full volatile organic compounds (VOCs), and PAHs to check current soil concentrations at the areas that had previously been identified as being over cleanup levels. All of the soil samples collected were below migration to groundwater cleanup levels. (ADEC 2020)

Historical soil analytical results for are presented in Attachment A, and a summary is provided in the table below. All available data was compared to current cleanup levels established in 18 AAC 75.341 Table B.

Analyte	Number of Samples	Number of Detects	Concentration Range (mg/kg)	Soil Cleanup Level (mg/kg)
DRO	48	37	<0.050 – 8,500	250
GRO	44	26	<0.010 – 11,000	300
Benzene	89	34	<0.0005 – 2.43	0.022
Toluene	89	55	<0.0007 – 67	6.7
Ethylbenzene	91	33	<0.0008 – 17	0.13
Total Xylenes	87	64	<0.0008 – 2,600	1.5
Lead	21	21	5.1 – 41	400*
Naphthalene	11	8	0.000024 – 0.006	0.038
1,2-Dibromoethane	14	0	<0.0009 – <0.054	0.00024
Vinyl Chloride	10	4	<0.053 – 0.39	0.00080

Notes:

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

mg/kg = milligrams

* = Under 40-inch zone Human Health Cleanup Level considered; migration to groundwater cleanup level not established.

Soil Cleanup Level Reference: 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, rev. January 2019; Table B1. Method Two – Soil Cleanup Levels, Migration to Groundwater)

4.2 Soil Vapor Investigations

In 2008, ADEC met with Chevron and consultants to discuss an indoor air evaluation for this site and the semi-annual groundwater monitoring as scheduled. The site is ranked on the new Exposure Tracking Model (ETM). A conceptual site model (CSM) was submitted. The CSM outlines potential pathways including incidental soil ingestion, ingestion of groundwater, inhalation of outdoor air, and inhalation of indoor air. (ADEC 2020)

On February 24, 2010 Conestoga-Rovers & Associates (CRA) submitted a Vapor Intrusion Evaluation Report summarizing the vapor intrusion risk at the site. No vapor intrusion risk was identified at the site due to light non-aqueous phase liquid (LNAPL) never being observed at the site, and concentrations of site COCs have not been observed above ADEC cleanup levels within close proximity (within 7 feet) to structures (CRA, 2010).

4.3 Groundwater Monitoring and Investigations

In October 1986, RZA consultants conducted a UST site characterization/assessment. Groundwater at that time was observed at 36 feet and flowing towards the northwest. A groundwater sample from well MW-3, was collected in November of the same year and the results showed 71 micrograms per liter (µg/L) of benzene. In January 1987, Unocal replaced all the USTs after a diesel storage tank did not pass a hydrostatic test. ADEC directed Unocal to collect samples at the nearest downgradient drinking water well. RZA conducted an investigation and found that all private residences in the study area were on city water. The sampling was not completed. A groundwater monitoring program was established in June 1987. (ADEC 2020)

In 1998, Unocal replaced the USTs again. Tanks were removed between April 8 and April 10, 1998 and replaced with new tanks. Contaminated soil and groundwater were found on site and were monitored in subsequent groundwater monitoring episodes. Between 2003 and 2004, well MW-3 was replaced and well MW-4 was abandoned. In December 2005, an additional monitoring well, MW-8, was installed. The soil sample results from the installation of MW-8 met respective cleanup levels. In 2009, ADEC requested additional soil and groundwater characterization. Results from the groundwater monitoring event showed a decrease of concentrations in the four wells sampled (Up to 0.1 mg/l DRO, non-detect (<1 µg/L) benzene, and non-detect (<0.01 mg/l) GRO in the groundwater). Based on these results, sampling of monitoring wells MW-1 and MW-2 were suspended. (ADEC 2020)

In 2010, ADEC approved an assessment work plan to include the installation of monitoring wells at C-1, C-7 (if soil contamination extends to groundwater at that location), and C-4 (if it extends to groundwater at that location but does not at C-7). In October 2011, ADEC approved switching from semi-annual to annual groundwater monitoring. The Annual 2018 Groundwater Monitoring Report (November 2018)

concluded that no BTEX above ADEC cleanup levels were detected in any sample analyzed, and that the samples have been below the cleanup levels since 1999. (ADEC 2020)

A review of the groundwater data for the Site indicates that all analyses are less than the 18 AAC 75.345 Table C criteria. It should be noted that Table C does not specify values for MTBE. However, the proposed value for MTBE is 470 µg/L. All MTBE concentrations at the Site are less than 470 µg/L. (ADEC 2020)

Full groundwater analytical results are presented in Attachment B, and a summary is provided in the table below.

Analyte	Number of Samples	Number of Detects	Concentration Range (mg/L)	Groundwater Cleanup Level (mg/L)
DRO	72	49	<0.023 – 7.1	1.5
GRO	75	10	<0.010 – 21.5	2.2
Benzene	115	22	<0.00015 – 11.3	0.0046
Toluene	115	23	<0.00011 – 1.190	1.1
Ethylbenzene	115	19	<0.00016 – 0.180	0.015
Total Xylenes	115	25	<0.0003 – 3.040	0.19
1,2-Dibromoethane	3	0	<0.0000097 – <0.0003	0.000075

Notes:

mg/L = milligrams per liter

NA = not applicable

USEPA = United States Environmental Protection Agency

GCL = Groundwater Cleanup Level (Reference: 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, rev. January 2019; Table C Groundwater Cleanup Levels)

5 SITE MONITORING ACTIVITIES

Four monitoring wells (MW-1 through MW-4) were installed on November 15, 1986, three additional monitoring wells were installed on May 22, 1997 (MW-5 through MW-7), one additional monitoring well

was installed on March 9, 2005 (MW-8), and a final additional monitoring well (MW-9) was installed on August 8, 2010 to help define the extent of the groundwater contamination at this site. Locations of monitoring wells are presented on Figure 2. As of September 6, 2018, all groundwater samples met ADEC groundwater cleanup levels. The depth to groundwater is at 35 to 38 feet bgs at this site, and predominately flows to the northeast. ADEC has recommended this site for closure. (ADEC 2020)

6 SITE MONITORING WELL DECOMMISSIONING

In May 2019, ADEC requested a work plan for decommissioning the remaining monitoring wells (MW-1, MW-2, MW-3, MW-8 and MW-9). In line with the May 13th, 2019 correspondence from ADEC requesting a work plan, Arcadis submitted the *Work Plan for Well Abandonment* to ADEC on December 12th, 2019. On July 23, 2020, Geotek Alaska, under the supervision and direct oversight by Arcadis staff, completed the well abandonment activities. On September 4, 2020, Arcadis submitted *Well Abandonment Report* summarizing well abandonment activities at MW-1, MW-2, MW-3, MW-8, and MW-9.

7 REMEDIAL EXCAVATION SUMMARY

As previously described in Section 4.1, the onsite USTs were replaced in 1987 and again in 1998. Contaminated soil remained at the site after the replacements, including 7,700 mg/kg RRO and 2,300 mg/kg DRO at the used oil tank. Additionally, 8,500 mg/kg DRO, 2,110 mg/kg GRO, and 8.2 mg/kg benzene remained at the gasoline tanks and piping. (ADEC 2020)

On November 17, 2010, ADEC approved the transport and disposal of three drums and one super sack of contaminated soil at the Columbia Ridge Landfill in Arlington, Oregon. Soil was generated during the July 2010 subsurface investigation. The contaminated soil included PCBs up to 0.11 mg/kg. (ADEC 2020)

Historical figures from previous investigations are included in Attachment C.

8 CONSTITUENTS OF POTENTIAL CONCERN

The remaining constituents of potential concern (COPCs) at the site and their associated ADEC CLs for soil and groundwater are presented in the tables below, as well as the applicable laboratory analysis method and laboratory detection limits (Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345).

8.1 Soil

Soil COPCs are based on historical results from previous site assessments conducted on the site. DRO, GRO, and benzene are the COPCs for this site. ADEC Soil Cleanup Levels (SCLs) for DRO, GRO, and benzene are presented in the table below, as well as their applicable laboratory analysis method and laboratory detection limits.

Soil COPC	Soil Cleanup Level (mg/kg)	Laboratory Method	Detection Limit (mg/kg)

DRO	230	Alaska Method AK 102	<0.015
GRO	260	Alaska Method AK 101	<0.015
Benzene	0.022	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.005
Ethylbenzene	0.13	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.005
Total Xylenes	1.5	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.005
1,2-Dibromoethane	0.00024	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.0009
Vinyl Chloride	0.00080	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.00100

Notes:

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

mg/kg = milligrams per kilograms

NA = not applicable

USEPA = United States Environmental Protection Agency

SCL = Soil Cleanup Level (Reference: 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, rev. January 2019; Table B1. Method Two – Soil Cleanup Levels, Migration to Groundwater)

8.2 Groundwater

Groundwater COPCs are based on historical results from previous groundwater monitoring and investigation activities conducted on the site. COPCs and their associated groundwater ADEC Groundwater Cleanup Levels (GCLs) are presented in the table below, as well as their applicable laboratory analysis method and laboratory detection limits.

Groundwater COPC	Groundwater Cleanup Level (mg/L)	Laboratory Method	Detection Limit (mg/L)
DRO	1.5	Alaska Method AK 102	<0.010

GRO	2.2	Alaska Method AK 101	<0.010
Benzene	0.0046	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.0005
Toluene	1.1	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.0005
Ethylbenzene	0.015	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.0005
Total Xylenes	0.19	USEPA Method 8021B or 8260B, or SW-846 8021B	<0.0005

Notes:

mg/L = milligrams per liter

NA = not applicable

USEPA = United States Environmental Protection Agency

GCL = Groundwater Cleanup Level (Reference: 18 AAC 75 Oil and Other Hazardous Substances Pollution Control, rev. January 2019; Table C Groundwater Cleanup Levels)

9 SITE CONDITIONS SUMMARY

From the ADEC Contaminated Sites Program (CSP) Site Closure Memorandum for all sites (ADEC 2020):

1.) ☑ The extent of hazardous substance contamination must be properly characterized (18 AAC 75.335. Site characterization) and/or adequate characterization of the horizontal and vertical extent of petroleum contamination in soil, groundwater, and surface water (18 AAC 78.235. Release investigation);

   a. As described in Section 4.1 Soil Investigations, Section 4.2 Soil Vapor Investigations, and Section 4.3 Groundwater Monitoring and Investigation, the contamination has been characterized and is well defined.

2.) ☑ Free product must be recovered to the maximum extent practicable (18 AAC 75.325(f)(l)(B) and 18 AAC 78.240(b));

   a. As described in Section 4.3 Groundwater Monitoring and Investigation, LNAPL was not discovered during groundwater monitoring activities.

3.) ☑ Surface soil staining must be evaluated and cleaned up to the maximum extent practicable (18 AAC 75.325(f)(l)(E));

   a. As described in Section 7 Remedial Excavation Summary, three drums and one super sack of contaminated soil was disposed of in 2010 to address surface soil concerns. There are no longer surface soil concerns. As described in Section 7 Remedial Excavation Summary,

soil samples were collected from the site where analytical results can be found in Attachment A.

4.) ☑ The maximum allowable petroleum (GRO, DRO, RRO) cleanup levels for soil must be achieved unless the responsible party has demonstrated the contaminants will not migrate and will not pose an unacceptable risk to human health or the environment:

a. As described in Section 4.1 Soil Investigations, the contaminants are no longer present. Full analytical data for soil samples is presented in Attachment A.

5.) ☑ There are no unacceptable risks to sensitive subpopulations, if present.

a. There are no sensitive subpopulations present at this site.

9.1 Groundwater

Hazardous Substances in Groundwater
(Check ONE of the following:)

A. ☑ Contaminant concentrations in groundwater meet applicable cleanup levels throughout the groundwater beneath the site;
B. ☐ Contaminant concentrations in groundwater meet applicable cleanup levels at alternative points of compliance approved by CSP (EPM II approval is required for this determination) in accordance with 18 AAC 75.345(e) and ICs can prevent groundwater use as drinking water within the upgradient, impacted area; or
C. ☐ CSP determined that groundwater beneath the site is not a current source of drinking water nor a reasonably expected potential future drinking water source (18 AAC 75.350) (EPM III approval is required for this determination) and that ICs can prevent such use.

a. As discussed in Section 4.3 Groundwater Monitoring and Investigations, groundwater beneath the site has been analyzed and contaminant concentrations are below the ADEC criteria. Full groundwater analytical data can be found in Attachment B.

AND
(Check ALL of the following:)

A. ☑ The groundwater contaminant plume is shown to be steady state or shrinking (if alternative points of compliance have been approved, this applies to water up-gradient to the points of compliance);
B. ☑ Groundwater contaminant concentrations are decreasing (if alternative points of compliance have been approved, this applies to water up-gradient to the points of compliance);
C. ☑ All other potentially complete human health exposure pathways (e.g., vapor intrusion) have been addressed;
D. ☑ Residual contaminants in groundwater do not currently, and are not expected to, cause a violation of the water quality standards in nearby surface waters, nor pose an unacceptable ecological risk; and
E. ☑ The CSP determined the residual contamination does not pose a current unacceptable risk to human health, safety or welfare, or to the environment and that potential future risk can be mitigated through institutional controls.

The dissolved-phase petroleum hydrocarbon impacts were located throughout the site. Groundwater concentrations are discussed below and included in Attachment B.

- A groundwater sample from well MW-3 was collected in November of 1986, and the results showed 71 µg/l of benzene. Concentrations of benzene were not detected above the ADEC GCL in MW-3 in 1992-1997. After 1999, benzene has not been detected in well MW-3.

- Results from the groundwater monitoring event in 2009 showed a decrease of concentrations in the four wells sampled (Up to 0.1 mg/l DRO, non-detect (<1 µg/L) benzene, and non-detect (<0.01 mg/l) GRO in the groundwater). Based on these results, sampling of monitoring well MW-1 and MW-2 were suspended.

- In October 2011, ADEC approved switching from semi-annual to annual groundwater monitoring. The Annual 2018 Groundwater Monitoring Report (November 2018) concluded that no BTEX above ADEC cleanup levels were detected in any sample analyzed, and that the samples have been below the ADEC groundwater cleanup levels since 1999.

The other monitoring wells have not exceeded the ADEC GCLs since 1999. The groundwater analytical results for GRO, BTEX, and MTBE are presented in Attachment B.

There are no residual contaminants in groundwater, so there is not an expected risk and no need for institutional controls.

9.2 Soil

Site Closure Criteria for Cleanup Complete with Institutional Controls *is appropriate when the criteria below have been met.*

1. ***Hazardous Substances in Soil***
(Check ONE of the following:)

A. ☑ Approved migration to groundwater cleanup levels have been achieved;
B. ☐ CSP has determined that the contaminant plume has achieved a point of steady state equilibrium and that additional soil cleanup is not necessary to facilitate groundwater cleanup nor to prevent leaching to groundwater, this determination requires EPM II approval and results in a decision that residual contaminants in soil do not pose an unacceptable migration to groundwater risk; or
C. ☐ CSP determined that groundwater beneath the site is not a current, nor reasonably expected potential future, source of drinking water (18 AAC 75.350) and that the migration to groundwater cleanup levels are not applicable (requires EPM III approval).

a. As detailed in Section 4.1 Soil Investigations, the contaminants are no longer present. Full analytical data for soil samples is presented in Attachment A.

AND
(Check ONE of the following:)

A. ☑ Method 2 Table B1 human health and Table B2 ingestion and inhalation cleanup levels have been achieved to a depth of fifteen (15) below the ground surface, but some other limitation triggers the need for ICs;
B. ☐ Site specific risk-based alternative cleanup levels for human health (for Table B1 compounds), or ingestion or inhalation (for Table B2 compounds) based on a commercial/industrial or other non-residential land use have been approved under Methods 3 or 4 and have been achieved within fifteen (15) feet below the ground surface and residential use of the site can be prevented through ICs; or

C. ☐ *Risk-based cleanup levels for human health (for Table B1 compounds), or ingestion and inhalation or the maximum allowable concentrations (for Table B2 compounds) have not been achieved in soil within 15' below the ground surface, but CSP has determined the cleanup has been conducted to the maximum extent practicable or necessary and that potential exposure to remaining subsurface contaminants can be prevented through ICs, this determination requires EPM III approval;*

b. As detailed in Section 7 Remedial Excavation Summary, 3 drums and 1 super sack of contaminated soil was disposed of in 2010 to address surface soil concerns. There are no longer surface soil concerns. As detailed in Section 4.1 Soil Investigations, the contaminants are no longer present. Full analytical data for soil samples is presented in Attachment A.

AND

(Check ALL of the following:)

A. ☑ *If a cleanup level has been approved that is less stringent than the cleanup level appropriate for residential land use, an environmental covenant has been signed by each affected landowner or other approved ICs are in effect prohibiting residential use (AS 46.04.0305; 18 AAC 75.340(e) and (f));*

B. ☑ *Any current vapor intrusion risks have been addressed;*

C. ☑ *There are no unacceptable ecological risks; and*

D. ☑ *There are no concerns over the potential for contaminant migration from polluted soil to surface water that could result in a violation of the water quality standards or pose an ecological risk.*

9.2.1 Vertical Extent of Impact

The site assessments conducted between 1986 and 2018 consisted of the advancement of 19 soil borings and the installation of nine monitoring wells. Soil samples were collected from soil borings between 2 and 16 feet bgs and from the monitoring wells' borings between 1.75 and 34.5 feet bgs. Soil analytical results indicate benzene present on site at depths between 12 feet bgs to 34 feet bgs. Up to 0.028 mg/kg benzene remains in the areas sampled in 2011. Up to 2.43 mg/kg benzene, 18.5 mg/kg GRO, and 46.4 mg/kg DRO was detected in the former used oil tank area (MW-5 soil samples) with 2.43 mg/kg benzene at 34 feet bgs and 0.621 mg/kg benzene at 12.5 feet bgs. There was also a detection of 0.08 mg/kg benzene in the former 4,000-gallon tank location (C11) at 10 feet bgs. Soil analytical results are included in for DRO, GRO, and BTEX and presented in Attachment A.

9.2.2 Horizontal Extent of Impact

Soil samples were collected from the 19 soil borings and nine monitoring wells. The soil borings are located primarily in the vicinity of the former USTs. The monitoring wells are located throughout the site. Soil analytical results between 1986 and 2018 show soil concentrations in the vicinity of the former USTs. Up to 2.43 mg/kg benzene, 18.5 mg/kg GRO, and 46.4 mg/kg DRO was in the former used oil tank area (MW-5 soil samples). There is also 0.08 mg/kg benzene in the former 4,000-gallon tank location (C11). Soil analytical results are included in for DRO, GRO, and BTEX are presented in Attachment A.

10 CONCEPTUAL SITE MODEL SUMMARY

The overall conceptual site model (CSM) is presented in the previous sections of this report regarding site history, geology and hydrogeology, and results of site investigation activities. This section of the CSM evaluates the risk to potential receptors at the site (Attachment D). The CSM identifies the potential sources of chemicals, routes and mechanisms of transport, impacted media, and complete exposure pathways. A potentially complete exposure pathway is a pathway by which a constituent travels from a source to a human or ecological receptor and consists of a source, transport or retention mechanism, receptor, and exposure route.

ICs are proposed to protect human health, safety, welfare, and the environment for the residual COC concentrations remaining in site soils and groundwater. Because there are no residual COC concentrations remaining in soils and groundwater at this site, no ICs are needed.

10.1 Sources

The sources of petroleum hydrocarbons are the site include the current features, USTs and dispenser/fuel loading racks.

10.2 Release Mechanism

Soil and groundwater gasoline contamination was identified in a 1986 site investigation. In January 1987, Unocal replaced all the USTs after a diesel storage tank did not pass a hydrostatic test. In 1998, Unocal replaced the USTs again. Contaminated soil remained at the site after the replacements (up to 2,300 mg/kg DRO and 7,700 mg/kg RRO at the used oil tank; up to 8.2 mg/kg benzene, 2,110 mg/kg GRO, and 8,500 mg/kg DRO at the gasoline tanks and piping). Depths to groundwater range from 35 to 38 feet below ground surface at this site and predominately flows to the northeast. (ADEC 2020)

10.3 Potential Exposure Pathways and Receptors

10.3.1 Exposures to Human Receptors

The site is currently an active service station in a commercial area. Potential human receptors include residents (adult or child), commercial or industrial worker, construction worker, site visitor, or trespasser.

10.3.2 Surface Soil (0 to 2 feet bgs)

Surface soil has been assessed on site, as discussed in section 4.1. Potential surface soil impacts related to site operations were characterized. Based on the site uses, the exposure pathways of incidental soil ingestion and dermal absorption are incomplete for current and future receptors.

10.3.3 Subsurface Soil (2 to 15 feet bgs)

Subsurface soil has been assessed on site, as discussed in section 4.1. Based on site uses, the exposure pathway of ingestion/direct contact and inhalation is incomplete for current and future receptors.

The exposure pathways of incidental soil ingestion and dermal absorption are incomplete for current and future receptors.

10.3.4 Groundwater

Groundwater is located at a depth of approximately 37 feet bgs, as discussed in section 4.3. Groundwater is not currently being used as a drinking water at the site or adjacent properties. Based on potential future use, the exposure pathway of ingestion of groundwater is incomplete, and the exposure pathway of inhalation of volatile compounds is incomplete for current and future receptors.

10.3.5 Air

In 2008, ADEC met with Chevron and consultants to discuss an indoor air evaluation for this site and the semi-annual groundwater monitoring as scheduled. The site is ranked on the new ETM. Based on the site use, the exposure pathways of inhalation of outdoor air and inhalation of indoor air are incomplete for current and future receptors.

10.3.6 Other Media

Other receptors which were considered and were ruled out include farmers or subsistence harvesters and consumers through consumption of produce or other vegetation impacted by site COPCs. These receptors were excluded because the site is located in a commercial/industrial area of Anchorage. The ADEC Human Health Conceptual Site Model scoping and graphic forms are included in Attachment D.

10.3.7 Ecological Receptor Exposures

Ecological receptor exposures at this site are considered to be incomplete for the following reasons:

- The current site use is an active service station, where wildlife is not likely to access the site.
- The site does not contain surface water resources.
- The site is paved and is located in a commercial/industrial area.

11 SENSITIVE RECEPTORS AND EXPOSURE PATHWAYS

11.1 Cumulative Risk Assessment

Site Closure Criteria for Cumulative Risk Standards
(Check the following:)
☑ Cumulative risk standards in 18 AAC 75.325(g) or 18 AAC 78.600(d) have been achieved for the current and intended future land use scenarios, or institutional controls are in place to prevent exposure to contaminants that pose potential risk above the standards.

The cumulative risk assessment is included in Attachment E.

11.2 Surface Water

The closest surface water is Knik Arm, located approximately 1.25 miles west of the Site.

11.3 Water Supply Wells

There are no water supply wells on the property.

11.4 Potential Receptors and Exposure Pathways

A review of potential receptors at the Site was conducted based on the site's location and current and expected land use. The site is currently an active service station and is expected to remain so for the reasonable and foreseeable future. Land use in the site vicinity is mixed industrial/commercial.

Anticipated potential receptors include residents (adult or child), future commercial/industrial/construction workers, site visitors, and trespassers. There are no offsite receptors associated with the site as impacted soil and groundwater are well defined. COCs may be retained in site soils, or become subject to transport mechanisms, such as wind erosion and transport, volatilization into outdoor air, percolation to groundwater, migration in groundwater and biodegradation/attenuation in subsurface soil and/or groundwater.

12 REQUEST FOR CLOSURE

The Chevron Service Station 306451 site has been characterized in accordance with 18 AAC 75.335. The horizontal and vertical extent of the petroleum COCs in site soils and groundwater are clearly defined and are presented within this report. The site characterization and groundwater monitoring results presented herein, support the contention that the contaminant plume on site has achieved a point of steady state equilibrium.

Arcadis asserts the groundwater beneath the site is not a current or expected future source of drinking water. Also, the site characterization, monitoring, and remedial activities support the contention that the residual COCs in site soils and groundwater do not pose a current unacceptable risk to human health, safety, and the environment.

Based on this evaluation, Arcadis concludes that the site meets the requirements for Cleanup Complete without institutional controls.

References

Alaska Department of Environmental Conservation (ADEC). 2009. Technical Memorandum. Environmental Laboratory Data and Quality Assurance Requirements. March 2009.

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Arcadis. 2019. Work Plan for Well Abandonment. December 12.

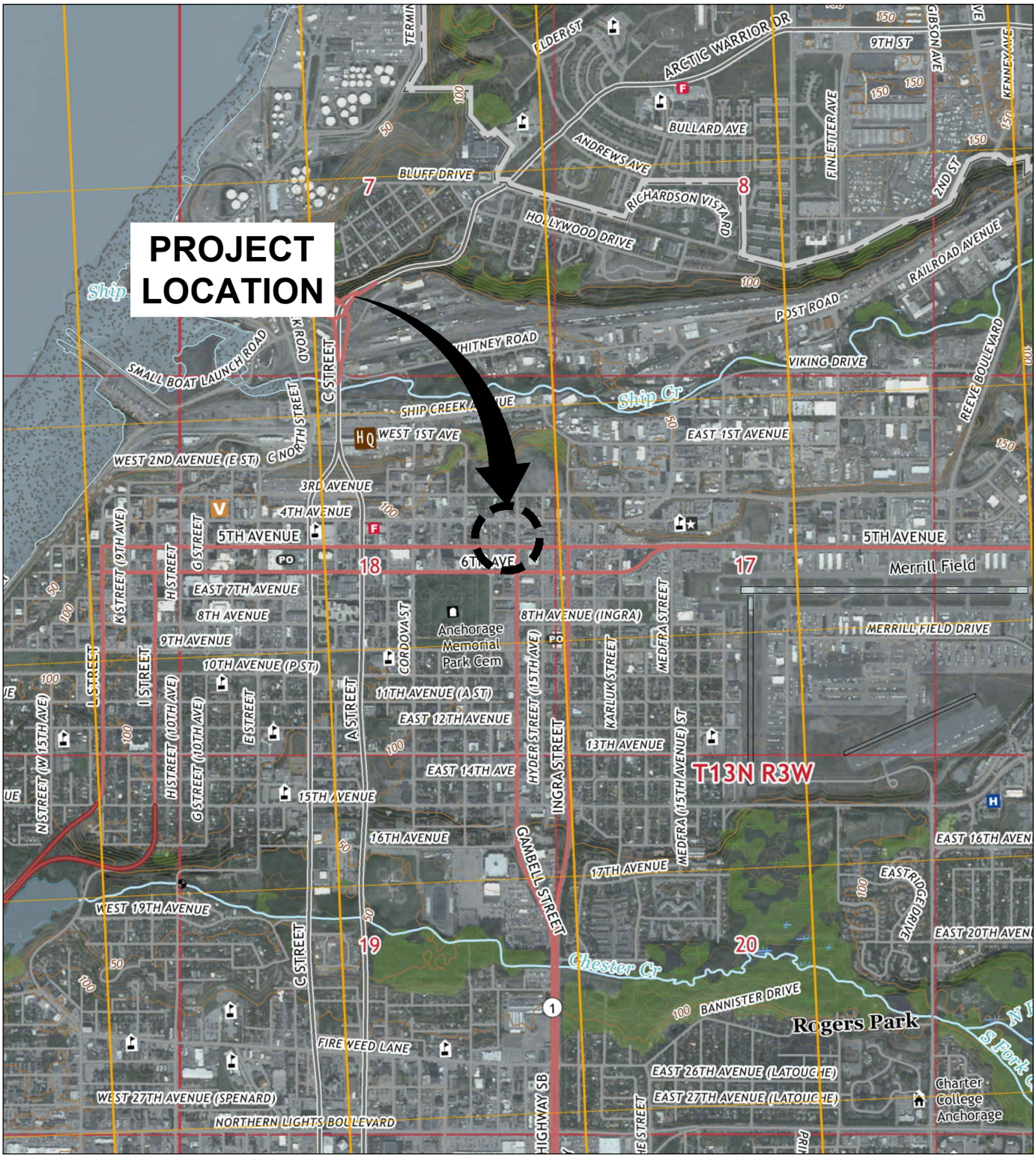
GHD. 2017. Site Assessment Work Plan. May 21.

GHD. 2018a. Annual Groundwater Monitoring Report. November 13.

GHD. 2018b. Site Assessment Report and Cleanup Closure Request. December 4.

Spill Prevention and Response and Department of Environmental Conservation. 2020. “Alaska Department of Environmental Conservation.” Division of Spill Prevention and Response, dec.alaska.gov/Applications/SPAR/PublicMVC/CSP/SiteReport/23368. March 3.

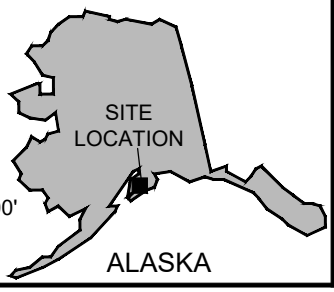
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. ANCHORAGE A-8., ALASKA, 2019.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.

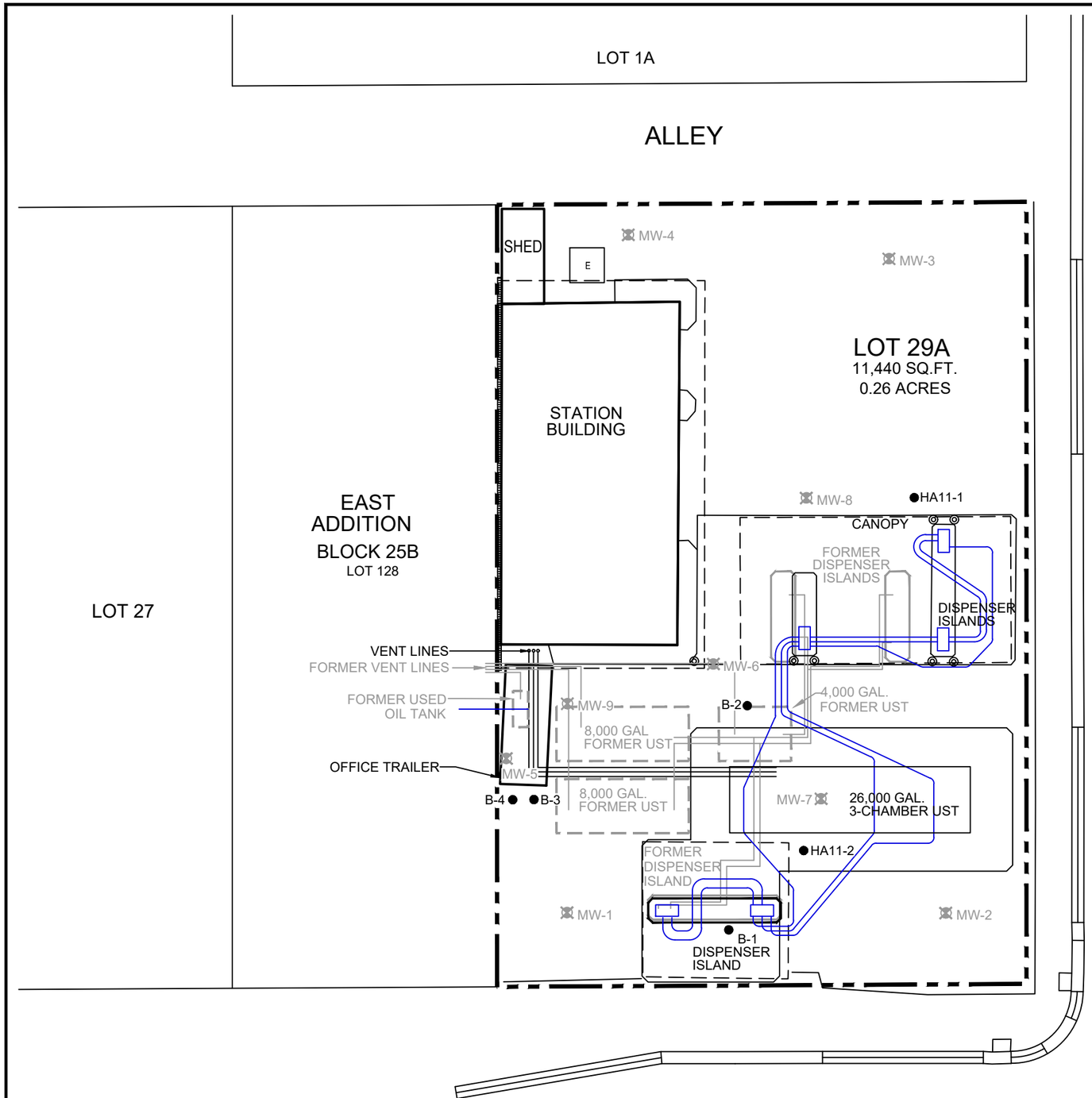


CHEVRON SERVICE STATION 306451
442 GAMBELL STREET
ANCHORAGE, ALASKA

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

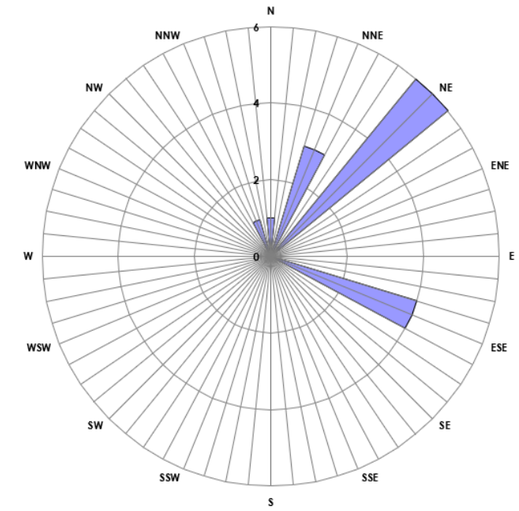
FIGURE 1



LEGEND:

- PROPERTY BOUNDARY
- PRODUCT DELIVERY LINES
- DESTROYED MONITORING WELL
- SOIL BORING
- UST UNDERGROUND STORAGE TANK
- GAL. GALLON

N



HISTORICAL GROUNDWATER FLOW DIRECTION

NOTES:

1. BASE MAP PROVIDED BY GHD, DATED 11/13/2018, AT A SCALE OF 1=20'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 20' 40'

APPROXIMATE SCALE 1 in. = 20 ft.

FORMER SERVICE STATION 306451
442 GAMBELL STREET
ANCHORAGE, ALASKA

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

ATTACHMENT A

Historical Soil Analytical Results

Attachment A.1 Soil Analytical Results
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	Benzene High (mg/kg)	Benzene Low (mg/kg)	Toluene High (mg/kg)	Toluene Low (mg/kg)	Ethylbenzene High (mg/kg)	Ethylbenzene Low (mg/kg)	Total Xylenes High (mg/kg)	Total Xylenes Low (mg/kg)	Naphthalene (mg/kg)	Lead (mg/kg)	Comments
ADEC Soil Cleanup Level				**300**	**250**	**11,000**	**0.022**	**0.022**	**6.7**	**6.7**	**0.13**	**0.13**	**1.5**	**1.5**	**0.038**	**400**	
MW-5-12.5'	12.5	--	5/20/1997	**18.5**	**46.4**	--	**0.621**	--	**1.76**	--	**0.209**	--	**3.60**	--	--	--	
MW-5-34.0'	34.0	--	5/20/1997	**12.7**	**11.6**	--	**2.43**	--	**1.86**	--	**0.101**	--	<0.2	--	--	--	
MW-6-25.0'	25.0	--	5/20/1997	<5.0	<4.0	--	<0.05	--	**0.148**	--	<0.05	--	**0.179**	--	--	--	
MW-6-30.0'	30.0	--	5/20/1997	<5.0	**7.64**	--	<0.05	--	**0.0745**	--	<0.05	--	**0.229**	--	--	--	
MW-6-34.5'	34.5	--	5/20/1997	**67.8**	**46.6**	--	<0.25	--	<0.25	--	**0.262**	--	**1.03**	--	--	--	
MW-7-34.0'	34.0	--	5/21/1997	<5.0	<4.0	--	<0.05	--	<0.05	--	<0.05	--	<0.1	--	--	--	
MW-7-35.5'	35.5	--	5/21/1997	<5.0	<4.0	--	<0.05	--	<0.05	--	<0.05	--	<0.1	--	--	--	
C-1	2	--	4/8/1998	**710**	--	--	**2.3**	--	**13**	--	**6.5**	--	**120**	--	--	**25**	
C-2	8	--	4/9/1998	**9.5**	--	--	**0.036**	--	**0.25**	--	**0.093**	--	**1.6**	--	--	**3.6**	
C-3	9	--	4/9/1998	**87**	--	--	<0.2	--	**1.9**	--	**0.69**	--	**19**	--	--	**3.8**	
C-4	10-11	--	4/9/1998	**82**	--	--	**2.8**	--	**12**	--	**1.3**	--	**12**	--	--	**3.8**	
C-5	10-11	--	4/9/1998	**110**	--	--	<0.26	--	**3.1**	--	<0.26	--	**26**	--	--	**4.2**	
C-6	10-11	--	4/9/1998	**120**	--	--	<0.23	--	**3.6**	--	<0.23	--	**30**	--	--	**4.3**	
C-7	10-11	--	4/9/1998	**99**	--	--	**1.5**	--	**9.5**	--	**1.8**	--	**15**	--	--	**11**	
C-8	10-11	--	4/9/1998	**9.1**	--	--	**0.067**	--	**0.39**	--	**0.055**	--	**1.6**	--	--	**7.7**	
C-9	0	--	4/10/1998	<1.1	--	--	**0.025**	--	**0.022**	--	<0.011	--	**0.059**	--	--	**22**	Clean stockpile sample
C-10	0	--	4/10/1998	<1.1	--	--	**0.032**	--	**0.032**	--	**0.012**	--	**0.065**	--	--	**37**	Clean stockpile sample
C-11	10	--	4/10/1998	--	<4.1	--	**0.08**	--	**0.16**	--	**0.05**	--	**0.39**	--	--	--	
C-12	10	--	4/10/1998	--	**9.6**	--	**0.02**	--	**0.09**	--	**0.03**	--	**0.64**	--	--	--	
C-13	2-5	--	4/10/1998	**2.7**	<4.1	--	**0.023**	--	**0.059**	--	**0.025**	--	**0.36**	--	--	**3.9**	
C-14	1	--	4/10/1998	**3,500**	**67**	--	**85**	--	**47**	--	**94**	--	**500**	--	--	**17**	
C-15	1	--	4/10/1998	**740**	**450**	--	**18**	--	**100**	--	**18**	--	**97**	--	--	**88**	
C-16	1	--	4/10/1998	**11**	**12**	--	**0.015**	--	**0.11**	--	**0.077**	--	**1.9**	--	--	**7.5**	
C-17	1	--	4/10/1998	**12,000**	**1,400**	--	**81**	--	**840**	--	**210**	--	**1,900**	--	--	**55**	
C-18 (C-17 DUP)	1	--	4/10/1998	**7,600**	**1,800**	--	**56**	--	**570**	--	**140**	--	**1,200**	--	--	**57**	
C-19	8	--	4/10/1998	<1.4	**240**	--	**0.017**	--	**0.042**	--	**0.018**	--	**0.099**	--	--	--	
C-20	8	--	4/10/1998	**2.3**	**2,300**	--	**0.026**	--	**0.084**	--	**0.046**	--	**0.31**	--	--	--	
C-21	11	--	4/10/1998	**1.1**	**11**	--	**0.072**	--	**0.12**	--	**0.017**	--	**0.091**	--	--	--	
C-22	0	--	4/10/1998	<1.7	**370**	--	**0.03**	--	**0.062**	--	**0.026**	--	**0.091**	--	--	--	Impacted stockpile sample
C-23	0	--	4/10/1998	<1.5	**1,100**	--	**0.075**	--	**0.043**	--	<0.015	--	**0.033**	--	--	--	Impacted stockpile sample
C-24	10	--	4/13/1998	<1.1	--	--	<0.011	--	**0.052**	--	**0.011**	--	**0.13**	--	--	**17**	
C-25	10	--	4/13/1998	<1.2	--	--	**0.02**	--	**0.11**	--	**0.018**	--	**0.12**	--	--	**4.6**	
C26	2.5	--	4/14/1998	<1.4	ND	--	**0.017**	--	**0.069**	--	**0.018**	--	**0.073**	--	--	**6.7**	
C27 (C26-DUP)	2.5	--	4/14/1998	<1.6	ND	--	<0.016	--	**0.036**	--	<0.016	--	**0.035**	--	--	**5.7**	
C28	0.0	--	4/14/1998	<1.2	**120**	--	<0.012	--	**0.015**	--	<0.012	--	**0.051**	--	--	--	Clean stockpile sample
C29	0.0	--	4/14/1998	<1.4	**26**	--	<0.014	--	**0.027**	--	**0.018**	--	**0.11**	--	--	--	Clean stockpile sample
C30	0.0	--	4/14/1998	**1.1**	**29**	--	<0.011	--	**0.02**	--	**0.016**	--	**0.099**	--	--	--	Clean stockpile sample
C31	0.0	--	4/14/1998	<1.2	**6.2**	--	<0.012	--	**0.017**	--	<0.012	--	**0.023**	--	--	**5.1**	Clean stockpile sample
C32	0.0	--	4/14/1998	<1.1	**4.7**	--	<0.11	--	**0.026**	--	**0.013**	--	**0.047**	--	--	**5.6**	Clean stockpile sample
C33	0.0	--	4/14/1998	<0.90	<4.1	--	<0.009	--	<0.009	--	<0.009	--	<0.009	--	--	**5.1**	Clean stockpile sample
C34	0.0	--	4/14/1998	<0.80	**20**	--	<0.008	--	<0.008	--	<0.008	--	**0.013**	--	--	**7.8**	Clean stockpile sample
C35	0.0	--	4/15/1998	**8**	**50**	--	**0.040**	--	**0.56**	--	**0.14**	--	**0.98**	--	--	**24**	
C36 (C35-DUP)	0.0	--	4/15/1998	**16**	**45**	--	**0.087**	--	**1.0**	--	**0.03**	--	**2**	--	--	**22**	
C37	0.0	--	4/15/1998	**4.5**	**11**	--	<0.037	--	**0.12**	--	**0.074**	--	**0.68**	--	--	**8.3**	Clean stockpile sample
C38	0.0	--	4/15/1998	<1.1	**5.0**	--	<0.011	--	**0.017**	--	**0.011**	--	**0.084**	--	--	**5.9**	Clean stockpile sample
C39	0.0	--	4/15/1998	<0.90	**9.9**	--	<0.009	--	**0.022**	--	**0.017**	--	**0.11**	--	--	**6.0**	Clean stockpile sample
C40	0.0	--	4/15/1998	**180**	**56**	--	**0.56**	--	**8.4**	--	**4.1**	--	**32**	--	--	**11**	Impacted stockpile sample
C41 (C40-DUP)	0.0	--	4/15/1998	**180**	**78**	--	**0.52**	--	**9.0**	--	**4.2**	--	**31**	--	--	**9.9**	Impacted stockpile sample
C42	0.0	--	4/15/1998	**80**	**87**	--	**0.19**	--	**2.6**	--	**1.6**	--	**14**	--	--	**9.4**	Impacted stockpile sample
C43	0.0	--	4/15/1998	**120**	**90**	--	**0.23**	--	**5.3**	--	**2.9**	--	**23**	--	--	**11**	Impacted stockpile sample
C44	0.0	--	4/15/1998	**43**	**34**	--	**0.14**	--	**2.0**	--	**1.0**	--	**7.8**	--	--	**13**	Impacted stockpile sample
C45	2.5	--	4/21/1998	**11,000**	**8,500**	--	<8.2	--	**19**	--	**17**	--	**2,600**	--	--	**41**	
C46	2.5	--	4/21/1998	**130**	**740**	--	<0.16	--	<0.16	--	**0.20**	--	**18**	--	--	**19**	
C47	2.5	--	4/21/1998	**1**	**11**	--	<0.009	--	0.037	--	**0.013**	--	**0.15**	--	--	**6.9**	
C48	2.5	--	4/21/1998	**2,100**	**3,000**	--	<2.1	--	**67.0**	--	**14**	--	**400**	--	--	**8.6**	
C49	0.0	--	4/21/1998	**4,600**	**4,600**	--	<6.7	--	<6.7	--	<6.7	--	**820**	--	--	**23**	Impacted stockpile sample
CB10-1-071210	3	--	7/12/2010	**0.6 J [<0.7]**	**15 J [9.3 J]**	**110 J [57 J]**	0.003 J [0.003J]	<0.026 UJ [<0.018 UJ]	**0.007 [0.008]**	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	0.005 J [0.006]	<0.053 UJ [<0.035 UJ]	--	--	
CB10-2-071210	2.5	--	7/12/2010	<0.3	**6.9 J**	**68.0**	**0.001 J**	<0.018 UJ	**0.0009 J**	<0.035 UJ	<0.0009	<0.035 UJ	<0.0009	<0.035 UJ	--	--	
CB10-3-071210	3	--	7/12/2010	**0.8 J**	**31.0**	**280.0**	**0.01**	<0.019 UJ	**0.011**	<0.039 UJ	**0.002 J**	<0.039 UJ	**0.034**	<0.039 UJ	--	--	
CB10-4-12-071410	12	--	7/14/2010	**0.6 J [0.8 J]**	**7.1 J [<5.2 UJ]**	**27 J [7.8 J]**	**0.008 [0.009]**	**0.027 J [0.028]**	**0.011 [0.012]**	**0.12 J [0.14 J]**	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	**0.01 [0.01]**	**0.12 J [0.14 J]**	--	--	
CB10-4-15-071410	15	--	7/14/2010	**1 J**	**16.0**	**45.0**	**0.008**	<0.023 UJ	**0.012**	**0.078 J**	<0.001	<0.046 UJ	**0.015**	**0.11 J**	--	--	
CB10-5-071510-10	10	--	7/15/2010	**1.5 J**	**15.0**	**53.0**	**0.005**	<0.024 UJ	**0.019**	**0.064 J**	**0.002 J**	**0.059 J**	**0.027**	**0.62 J**	--	--	
CB10-5-071510-12	12	--	7/15/2010	**2.4 J**	**7.6 J**	**7.3 J**	**0.007**	<0.029 UJ	**0.03**	**0.12 J**	**0.006**	<0.059 UJ	**0.11**	**0.35 J**	--	--	
CB10-6-071510-10	10	--	7/15/2010	**1.7 J**	**19.0**	**65.0**	**0.006**	<0.025 UJ	**0.018**	**0.088 J**	**0.002 J**	<0.051 UJ	**0.032**	**0.25 J**	--	--	
CB10-6-071510-12	12	--	7/15/2010	**1.7 J**	**29.0**	**200.0**	**0.007**	<0.026 UJ	**0.025**	**0.12 J**	**0.003 J**	<0.052 UJ	**0.054**	**0.39 J**	--	--	
TB	--	--	7/8/2010	<0.5	--	--	<0.0005	<0.025 UJ	<0.001	<0.050 UJ	<0.001	<0.050 UJ	<0.001	<0.050 UJ	--	--	
EB -1	--	--	7/12/2010	<0.010	<0.050	<0.070	<0.0005	--	<0.0007	--	<0.0008	<0.0008	--	<0.0008	--	--	
EB-2	--	--	7/15/2010	<0.010	**0.071 J**	0.10 J	<0.0005	--	<0.0007	--	<0.0008	<0.0008	--	<0.0008	--	--	
HA11-1-NT-090911-2.0	2	--	9/19/2011	<0.7	<4.6	--	**0.012 J**	--	**0.014 J**	--	<0.0074	--	<0.022	--	--	--	
HA11-1-NT-090911-3.0	3	--	9/19/2011	<0.6	**13**	--	<0.0061	--	**0.044**	--	<0.0061	--	**0.031 J**	--	--	--	
HA11-2-NT-090911-2.0	2	--	9/19/2011	<0.5	**16**	--	<0.0055	--	**0.022**	--	<0.0055	--	**0.036 J**	--	--	--	
HA11-2-NT-090911-3.0	3	--	9/19/2011	**0.7 J**	**11 J**	--	<0.0063	--	**0.093 J**	--	**0.0067 J**	--	**0.031 J**	--	--	--	
DUP-1-NT-091911	3	--	9/19/2011	**0.6 J**	**10 J**	--	<0.0054	--	**0.024 J**	--	<0.0054	--	**0.026 J**	--	--	--	
621048-043014-KW-B1-1.5	1.5		4/30/2014	--	**6.3 J**	--	<0.030	--	<0.059	--	<0.059	--	<0.118	--	--	--	
621048-050314-KW-B2-10	10.0		5/3/2014	--	--	--	<0.016	--	<0.032	--	<0.032	--	<0.064	--	--	--	
621048-050314-KW-DUP	10.0		5/3/2014	--	<3.7 J	--	<0.054	--	<0.11	--	<0.11	--	<0.22	--	--	--	
621048-043014-KW-B3-12.5	12.5		4/30/2014	--	<3.5 J	--	<0.029	--	<0.058	--	<0.058	--	**0.059 J**	--	--	--	
621048-050114-KW-B4-32	32.0		5/1/2014	--	**66 J**	--	**0.34 J**	--	**1.9**	--	**0.52**	--	**5.7**	--	--	--	

Attachment A.1 Soil Analytical Results
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	GRO (mg/kg)	DRO (mg/kg)	RRO (mg/kg)	Benzene High (mg/kg)	Benzene Low (mg/kg)	Toluene High (mg/kg)	Toluene Low (mg/kg)	Ethylbenzene High (mg/kg)	Ethylbenzene Low (mg/kg)	Total Xylenes High (mg/kg)	Total Xylenes Low (mg/kg)	Naphthalene (mg/kg)	Lead (mg/kg)	Comments
ADEC Soil Cleanup Level				**300**	**250**	**11,000**	**0.022**	**0.022**	**6.7**	**6.7**	**0.13**	**0.13**	**1.5**	**1.5**	**0.038**	**400**	
B18-1	1.75	--	5/29/2018	--	<4.2 [<4.1]	--	<0.027 [<0.028]	**0.0008 J [0.0008 J]**	<0.054 [<0.055]	**0.001 J [0.001 J]**	<0.054 [<0.055]	<0.001 [<0.0009]	<0.054 [<0.055]	<0.001 [<0.0009]	**0.006 [0.005]**	--	
B18-2	26.00	27.50	5/30/2018	--	<4.1 [<4.2]	--	<0.028 [<0.028]	**0.007 [0.006]**	<0.056 [<0.056]	**0.024 [0.024]**	<0.056 [<0.056]	<0.001 [<0.001]	<0.056 [<0.056]	**0.013 [0.012]**	<0.001 [<0.001]	--	
B18-2	32.50	34.50	5/30/2018	--	<4.2	--	<0.029	**0.006**	<0.057	**0.019**	<0.057	**0.001 J**	<0.057	**0.016**	**0.003 J**	--	
B18-3	13.00	17.00	5/30/2018	--	<4.2	--	<0.027	**0.002 J**	**0.055 J**	**0.004 J**	<0.054	<0.001	<0.054	**0.002 J**	<0.001	--	

Notes:

BTEX results reported without High/Low distinctions are presented in their respective High columns.

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GRO = Gasoline Range Organics by Alaska Series Method AK101

DRO = Diesel Range Organics by Alaska Series Method AK102 and 103

RRO = Residual Range Organics by Alaska Series Method AK102 and 103

Samples analyzed by USEPA (United States Environmental Protect Act) Method SW-846 8260C:

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

Naphthalene

Lead analyzed by 6010C

EB = Quality assurance sample, equipment blank

TB = Quality assurance sample, trip blank

Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,1,1-Trichloroethane Low (mg/kg)	1,1,1-Trichloroethane High (mg/kg)	1,1,2,2-Tetrachloroethane Low (mg/kg)
		ADEC Soil Cleanup Level		**32**	**32**	**0.0030**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.001
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.001
EB -1	--	--	7/12/2010	<0.0008	--	<0.001
EB-2	--	--	7/15/2010	<0.0008	--	<0.001

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,1,2,2-Tetrachloroethane High (mg/kg)	1,1,2-Trichloroethane Low (mg/kg)	1,1,2-Trichloroethane High (mg/kg)
		ADEC Soil Cleanup Level		**0.0030**	**0.0014**	**0.0014**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.0008	--
EB-2	--	--	7/15/2010	--	<0.0008	--

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,1-Dichloroethane Low (mg/kg)	1,1-Dichloroethane High (mg/kg)	1,1-Dichloroethene Low (mg/kg)
		ADEC Soil Cleanup Level		**0.092**	**0.092**	**--**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.001
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.001
EB -1	--	--	7/12/2010	<0.001	--	<0.0008
EB-2	--	--	7/15/2010	<0.001	--	<0.0008

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,1-Dichloroethene High (mg/kg)	1,2-Dibromoethane (Ethylene dibromide) Low (mg/kg)	1,2-Dibromoethane (Ethylene dibromide) High (mg/kg)
		ADEC Soil Cleanup Level		**--**	**0.00024**	**0.00024**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	-- [<0.001]	-- [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	--	--
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	-- [<0.001]	-- [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	--	--
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	--	--
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	--	--
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,2-Dichlorobenzene Low (mg/kg)	1,2-Dichlorobenzene High (mg/kg)	1,2-Dichloroethane Low (mg/kg)
		ADEC Soil Cleanup Level		**2.4**	**2.4**	**0.0055**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.001
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.001
EB -1	--	--	7/12/2010	<0.001	--	<0.001
EB-2	--	--	7/15/2010	<0.001	--	<0.001

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,2-Dichloroethane High (mg/kg)	1,2-Dichloropropane Low (mg/kg)	1,2-Dichloropropane High (mg/kg)
		ADEC Soil Cleanup Level		**0.0055**	**0.030**	**0.030**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,3-Dichlorobenzene Low (mg/kg)	1,3-Dichlorobenzene High (mg/kg)	1,4-Dichlorobenzene Low (mg/kg)
		ADEC Soil Cleanup Level		**2.3**	**2.3**	**0.037**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.001
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.001
EB -1	--	--	7/12/2010	<0.001	--	<0.001
EB-2	--	--	7/15/2010	<0.001	--	<0.001

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	1,4-Dichlorobenzene High (mg/kg)	Bromodichloro-methane Low (mg/kg)	Bromodichloromethane High (mg/kg)
		ADEC Soil Cleanup Level		**0.037**	**0.0043**	**0.0043**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

Notes:

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Bromoform Low (mg/kg)	Bromoform High (mg/kg)	Bromomethane (Methyl bromide) Low (mg/kg)
		ADEC Soil Cleanup Level		**0.10**	**0.10**	**0.024**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.002 [<0.002]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.002
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.002
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.002 [<0.002]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.002
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.002
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.002
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.002
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.002
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.002
EB -1	--	--	7/12/2010	<0.001	--	<0.001
EB-2	--	--	7/15/2010	<0.001	--	<0.001

Notes:

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Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Bromomethane (Methyl bromide) High (mg/kg)	Carbon Tetrachloride Low (mg/kg)	Carbon Tetrachloride High (mg/kg)
		ADEC Soil Cleanup Level		**0.024**	**0.021**	**0.021**
CB10-1-071210	3	--	7/12/2010	<0.11 UJ [<0.071 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.070 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.077 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.092 UJ [<0.11 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.093 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.097 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.12 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.10 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.10 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.10 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

Notes:

[ ] = Duplicate Sample Results

mg/kg= milligram per kilogram

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Chlorobenzene Low (mg/kg)	Chlorobenzene High (mg/kg)	Chloroethane Low (mg/kg)
		ADEC Soil Cleanup Level		**0.46**	**0.46**	**--**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.002 [<0.002]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.002
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.002
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.002 [<0.002]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.002
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.097 UJ	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.12 UJ	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.10 UJ	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.10 UJ	<0.052 UJ
TB	--	--	7/8/2010	<0.001	<0.10 UJ	<0.050 UJ
EB -1	--	--	7/12/2010	<0.0008	--	<0.001
EB-2	--	--	7/15/2010	<0.0008	--	<0.001

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Chloroethane High (mg/kg)	Chloroform (Trichloromethane) Low (mg/kg)	Chloroform (Trichloromethane) High (mg/kg)
		ADEC Soil Cleanup Level		**--**	**0.0071**	**0.0071**
CB10-1-071210	3	--	7/12/2010	<0.11 UJ [<0.071 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.070 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.077 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.092 UJ [<0.11 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.093 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.002	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.002	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.002	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.002	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.002	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	**0.006**	--
EB-2	--	--	7/15/2010	--	<0.0008	--

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Chloromethane (Methyl chloride) Low (mg/kg)	Chloromethane (Methyl chloride) High (mg/kg)	cis-1,2-Dichloroethene Low (mg/kg)
		ADEC Soil Cleanup Level		**0.61**	**0.61**	**0.12**
CB10-1-071210	3	--	7/12/2010	<0.002 [<0.002]	<0.11 UJ [<0.071 UJ]	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.002	<0.070 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.002	<0.077 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.002 [<0.002]	<0.092 UJ [<0.11 UJ]	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.002	<0.093 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.002	<0.097 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.002	<0.12 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.002	<0.10 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.002	<0.10 UJ	<0.001
TB	--	--	7/8/2010	<0.002	<0.10 UJ	<0.001
EB -1	--	--	7/12/2010	<0.001	--	<0.0008
EB-2	--	--	7/15/2010	<0.001	--	<0.0008

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	cis-1,2-Dichloroethene High (mg/kg)	cis-1,3-Dichloropropene Low (mg/kg)	cis-1,3-Dichloropropene High (mg/kg)
		ADEC Soil Cleanup Level		**0.12**	**--**	**--**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Dibromo-chloromethane Low (mg/kg)	Dibromochloromethane High (mg/kg)	Methylene Chloride Low (mg/kg)
		ADEC Soil Cleanup Level		**0.0027**	**0.0027**	**0.33**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.002 [<0.002]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.002
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.002
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.002 [<0.002]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.002
CB10-5-071510-10	10	--	7/15/2010	<0.002	<0.097 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.002	<0.12 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.002	<0.10 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.002	<0.10 UJ	<0.001
TB	--	--	7/8/2010	<0.002	<0.10 UJ	<0.001
EB -1	--	--	7/12/2010	<0.002	--	<0.0008
EB-2	--	--	7/15/2010	<0.002	--	<0.0008

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Attachment A.2. Soil Analytical Results - Additional VOCs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Methylene Chloride High (mg/kg)	Tetrachloro-ethene Low (mg/kg)	Tetrachloroethene High (mg/kg)
		ADEC Soil Cleanup Level		**0.33**	**0.19**	**0.19**
CB10-1-071210	3	--	7/12/2010	<0.11 UJ [<0.071	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.070 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.077 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.092 UJ [<0.11	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.093 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.049 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.0008	--
EB-2	--	--	7/15/2010	--	<0.0008	--

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Attachment A.2. Soil Analytical Results - Additional VOCs
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442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	trans-1,2-Dichloroethene Low (mg/kg)	trans-1,2-Dichloroethene High (mg/kg)	trans-1,3-Dichloropropene Low (mg/kg)
		ADEC Soil Cleanup Level		**1.3**	**1.3**	**--**
CB10-1-071210	3	--	7/12/2010	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]
CB10-2-071210	2.5	--	7/12/2010	<0.0009	<0.035 UJ	<0.0009
CB10-3-071210	3	--	7/12/2010	<0.001	<0.039 UJ	<0.001
CB10-4-12-071410	12	--	7/14/2010	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]
CB10-4-15-071410	15	--	7/14/2010	<0.001	<0.046 UJ	<0.001
CB10-5-071510-10	10	--	7/15/2010	<0.001	<0.049 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.001	<0.059 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.001	<0.051 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.001	<0.052 UJ	<0.001
TB	--	--	7/8/2010	<0.001	<0.050 UJ	<0.001
EB -1	--	--	7/12/2010	<0.001	--	<0.001
EB-2	--	--	7/15/2010	<0.001	--	<0.001

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Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	trans-1,3-Dichloropropene High (mg/kg)	Trichloroethene Low (mg/kg)	Trichloroethene High (mg/kg)
		ADEC Soil Cleanup Level		**--**	**0.011**	**0.011**
CB10-1-071210	3	--	7/12/2010	<0.053 UJ [<0.035 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.035 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.039 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.046 UJ [<0.054 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.046 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.002	<0.097 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.002	<0.12 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.002	<0.10 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.002	<0.10 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.002	<0.10 UJ
EB -1	--	--	7/12/2010	--	<0.002	--
EB-2	--	--	7/15/2010	--	<0.002	--

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Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Trichlorofluoro-methane (CFC-11) Low (mg/kg)	Trichlorofluoromethane (CFC-11) High (mg/kg)	Trifluorotrichloro-ethane (Freon 113) Low (mg/kg)
		ADEC Soil Cleanup Level		**--**	**--**	**--**
CB10-1-071210	3	--	7/12/2010	<0.002 [<0.002]	<0.11 UJ [<0.071 UJ]	<0.002 [<0.002]
CB10-2-071210	2.5	--	7/12/2010	<0.002	<0.070 UJ	<0.002
CB10-3-071210	3	--	7/12/2010	<0.002	<0.077 UJ	<0.002
CB10-4-12-071410	12	--	7/14/2010	<0.002 [<0.002]	<0.092 UJ [<0.11 UJ]	<0.002 [<0.002]
CB10-4-15-071410	15	--	7/14/2010	<0.002	<0.093 UJ	<0.002
CB10-5-071510-10	10	--	7/15/2010	<0.002	<0.097 UJ	<0.001
CB10-5-071510-12	12	--	7/15/2010	<0.002	<0.12 UJ	<0.001
CB10-6-071510-10	10	--	7/15/2010	<0.002	<0.10 UJ	<0.001
CB10-6-071510-12	12	--	7/15/2010	<0.002	<0.10 UJ	<0.001
TB	--	--	7/8/2010	<0.002	<0.10 UJ	<0.001
EB -1	--	--	7/12/2010	<0.002	--	<0.001
EB-2	--	--	7/15/2010	<0.002	--	<0.001

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Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Trifluorotrichloroethane (Freon 113) High (mg/kg)	Vinyl Chloride Low (mg/kg)	Vinyl Chloride High (mg/kg)
		ADEC Soil Cleanup Level		**--**	**0.00080**	**0.00080**
CB10-1-071210	3	--	7/12/2010	<0.11 UJ [<0.071 UJ]	<0.001 [<0.001]	<0.053 UJ [<0.035 UJ]
CB10-2-071210	2.5	--	7/12/2010	<0.070 UJ	<0.0009	<0.035 UJ
CB10-3-071210	3	--	7/12/2010	<0.077 UJ	<0.001	<0.039 UJ
CB10-4-12-071410	12	--	7/14/2010	<0.092 UJ [<0.11 UJ]	<0.001 [<0.001]	<0.046 UJ [<0.054 UJ]
CB10-4-15-071410	15	--	7/14/2010	<0.093 UJ	<0.001	<0.046 UJ
CB10-5-071510-10	10	--	7/15/2010	<0.049 UJ	<0.001	<0.046 UJ
CB10-5-071510-12	12	--	7/15/2010	<0.059 UJ	<0.001	<0.059 UJ
CB10-6-071510-10	10	--	7/15/2010	<0.051 UJ	<0.001	<0.051 UJ
CB10-6-071510-12	12	--	7/15/2010	<0.052 UJ	<0.001	<0.052 UJ
TB	--	--	7/8/2010	<0.050 UJ	<0.001	<0.050 UJ
EB -1	--	--	7/12/2010	--	<0.001	--
EB-2	--	--	7/15/2010	--	<0.001	--

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Bold and Shaded= Value exceeds ADEC Soil Cleanup Level

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

-- = Not sampled/not measured/not available

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

UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

Attachment A.3. Soil Analytical Results - PAHs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Acenaphthylene (mg/kg)	Acenaphthalene (mg/kg)	Anthracene (mg/kg)	Benzo(a)anthracene (mg/kg)	Benzo(a)pyrene (mg/kg)
ADEC Soil Cleanup Level				**37**	**18**	**390**	**0.70**	**1.9**
B18-1	1.75	--	5/29/2018	0.0004 J / <0.0003	<0.0007 / <0.0007	<0.0007 / <0.0007	0.001 J / <0.0007	0.002 / <0.0007
B18-2	26.00	27.50	5/30/2018	<0.0003 / <0.0003	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0007 / <0.0007
B18-2	32.50	34.50	5/30/2018	<0.0003	<0.0007	0.0007 J	<0.0007	<0.0007
B18-3	13.00	17.00	5/30/2018	<0.0003	<0.0007	<0.0007	<0.0007	<0.0007
621048-043014-KW-B1-1.5	1.5	--	4/30/2014	<0.00036	<0.00072	0.00036 J	0.00092 J	0.00098 J
621048-050314-KW-B2-10	10	--	5/3/2014	<0.00036	<0.00073	<0.00036	<0.00073	<0.00073
621048-050314-KW-DUP	10	--	5/3/2014	<0.00037	<0.00074	<0.00037	<0.00074	<0.00074
621048-043014-KW-B3-12.5	12.5	--	4/30/2014	<0.00035	<0.00070	<0.00035	<0.00070	<0.00070
621048-050114-KW-B4-32	32	--	5/1/2014	0.0051 J	<0.0072	<0.0036	0.0081 J	<0.0072
CB10-1-071210	3	--	7/12/2010	<0.00075	<0.00037	0.00039 J	0.0016 J	0.0025
CB10-2-071210	2.5	--	7/12/2010	<0.00069	<0.00035	<0.00035	0.0012 J	0.0012 J
CB10-3-071210	3	--	7/12/2010	-	-	-	-	-
CB10-4-12-071410	12	--	7/14/2010	<0.00069	<0.00035	<0.00035	<0.00069	<0.00069
CB10-4-15-071410	15	--	7/14/2010	<0.00069	<0.00035	<0.00035	<0.00069	<0.00069
CB10-5-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-5-071510-12	12	--	7/15/2010	-	-	-	-	-
CB10-6-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-6-071510-12	12	--	7/15/2010	<0.00070	<0.00035	0.00076 J	0.0013 J	0.0033
TB	--	--	7/8/2010					
EB -1	--	--	7/12/2010	<0.0000097	<0.0000097	<0.0000097	<0.0000097	<0.0000097
EB-2	--	--	7/15/2010	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096

Notes:

[ ] = Duplicate Sample Results

mg/kg= milligram per kilogram

ADEC = Alaska Department of Environmental Conservation

Bold = Value exceeds lab detection limit

Bold and Shaded= Value exceeds ADEC Soil Cleanup Level

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

-- = Not sampled/not measured/not available

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

UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

PAH = Polycyclic Aromatic Hydrocarbons by USEPA Method 8270

Attachment A.3. Soil Analytical Results - PAHs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Benzo(b) fluoranthene (mg/kg)	Benzo(g,h,i) perylene (mg/kg)	Benzo(k) fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenz(a,h) anthrancene (mg/kg)
ADEC Soil Cleanup Level				**20**	**15,000**	**190**	**600**	**6.3**
B18-1	1.75	--	5/29/2018	0.006 / 0.003	0.003 J / 0.0007 J	0.003 / <0.0007	0.006 / 0.004	0.003 J / <0.0007
B18-2	26.00	27.50	5/30/2018	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0003 / <0.0003	<0.0007 / <0.0007
B18-2	32.50	34.50	5/30/2018	<0.0007	<0.0007	<0.0007	0.0006 J	<0.0007
B18-3	13.00	17.00	5/30/2018	<0.0007	<0.0007	<0.0007	0.0004 J	<0.0007
621048-043014-KW-B1-1.5	1.5	--	4/30/2014	0.0038	0.0013 J	<0.00072	0.0045	<0.00072
621048-050314-KW-B2-10	10	--	5/3/2014	0.0017 J	<0.00073	<0.00073	0.00076 J	<0.00073
621048-050314-KW-DUP	10	--	5/3/2014	0.0013 J	0.00086 J	<0.00074	<0.00037	<0.00074
621048-043014-KW-B3-12.5	12.5	--	4/30/2014	<0.00070	<0.00070	<0.00070	0.00052 J	<0.00070
621048-050114-KW-B4-32	32	--	5/1/2014	0.021	<0.0072	<0.0072	0.013 J	<0.0072
CB10-1-071210	3	--	7/12/2010	0.0051	0.0018 J	<0.00075	0.0071	0.0011 J
CB10-2-071210	2.5	--	7/12/2010	0.0023	0.0019	0.0011 J	0.0031	<0.00069
CB10-3-071210	3	--	7/12/2010	-	-	-	-	-
CB10-4-12-071410	12	--	7/14/2010	<0.00069	<0.00069	<0.00069	<0.00035	<0.00069
CB10-4-15-071410	15	--	7/14/2010	0.00083 J	0.00069 J	<0.00069	0.00076 J	<0.00069
CB10-5-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-5-071510-12	12	--	7/15/2010	-	-	-	-	-
CB10-6-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-6-071510-12	12	--	7/15/2010	0.0018	0.0057	<0.00070	0.0017 J	0.00076 J
TB	--	--	7/8/2010					
EB -1	--	--	7/12/2010	<0.0000097	<0.0000097	<0.0000097	<0.0000097	<0.0000097
EB-2	--	--	7/15/2010	<0.0000096	<0.0000096	<0.0000096	<0.0000096	<0.0000096

Notes:

[ ] = Duplicate Sample Results

mg/kg= milligram per kilogram

ADEC = Alaska Department of Environmental Conservation

Bold = Value exceeds lab detection limit

Bold and Shaded= Value exceeds ADEC Soil Cleanup Level

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

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PAH = Polycyclic Aromatic Hydrocarbons by USEPA Method 8270

Attachment A.3. Soil Analytical Results - PAHs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(1,2,3-cd)pyrene (mg/kg)	Naphthalene (mg/kg)	Phenanthrene (mg/kg)
		ADEC Soil Cleanup Level		**590**	**36**	**65**	**0.038**	**39**
B18-1	1.75	--	5/29/2018	0.001 J / 0.0009 J	0.0009 J / <0.0007	0.002 J / <0.0007	0.006 / 0.005	0.011 / 0.009
B18-2	26.00	27.50	5/30/2018	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0007 / <0.0007	<0.0001/<0.0001	<0.0007 / <0.0007
B18-2	32.50	34.50	5/30/2018	<0.0007	<0.0007	<0.0007	0.003 J	0.0008 J
B18-3	13.00	17.00	5/30/2018	<0.0007	<0.0007	<0.0007	<0.001	<0.0007
621048-043014-KW-B1-1.5	1.5	--	4/30/2014	0.0030	<0.00072	0.00074 J	0.0031	0.0087
621048-050314-KW-B2-10	10	--	5/3/2014	<0.00073	<0.00073	<0.00073	0.0015 J	<0.00073
621048-050314-KW-DUP	10	--	5/3/2014	<0.00074	<0.00074	<0.00074	0.0013 J	<0.00074
621048-043014-KW-B3-12.5	12.5	--	4/30/2014	<0.00070	<0.00070	<0.00070	0.00071 J	0.00099 J
621048-050114-KW-B4-32	32	--	5/1/2014	0.013 J	<0.0072	<0.0072	0.13	0.035
CB10-1-071210	3	--	7/12/2010	0.0020	<0.00075	0.0015 J	0.0037	0.0029
CB10-2-071210	2.5	--	7/12/2010	0.0017 J	<0.00069	0.00094 J	0.0023	0.0045
CB10-3-071210	3	--	7/12/2010	-	-	-	-	-
CB10-4-12-071410	12	--	7/14/2010	<0.00069	<0.00069	<0.00069	<0.00069	<0.00069
CB10-4-15-071410	15	--	7/14/2010	<0.00069	<0.00069	<0.00069	0.0022	0.0016 J
CB10-5-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-5-071510-12	12	--	7/15/2010	-	-	-	-	-
CB10-6-071510-10	10	--	7/15/2010	-	-	-	-	-
CB10-6-071510-12	12	--	7/15/2010	0.0031	<0.00070	0.0027	0.0048	0.0024
TB	--	--	7/8/2010					
EB -1	--	--	7/12/2010	<0.0000097	<0.0000097	<0.0000097	0.000024 J	<0.0000097
EB-2	--	--	7/15/2010	<0.0000096	<0.0000096	<0.0000096	0.000028 J	0.000011 J

Notes:

[ ] = Duplicate Sample Results

mg/kg= milligram per kilogram

ADEC = Alaska Department of Environmental Conservation

Bold = Value exceeds lab detection limit

Bold and Shaded= Value exceeds ADEC Soil Cleanup Level

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

-- = Not sampled/not measured/not available

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

UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

PAH = Polycyclic Aromatic Hydrocarbons by USEPA Method 8270

Attachment A.3. Soil Analytical Results - PAHs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Pyrene (mg/kg)
		ADEC Soil Cleanup Level		**87**
B18-1	1.75	--	5/29/2018	0.002 J / 0.001 J
B18-2	26.00	27.50	5/30/2018	<0.0007 / <0.0007
B18-2	32.50	34.50	5/30/2018	0.0008 J
B18-3	13.00	17.00	5/30/2018	<0.0007
621048-043014-KW-B1-1.5	1.5	--	4/30/2014	0.0027 J
621048-050314-KW-B2-10	10	--	5/3/2014	<0.00073
621048-050314-KW-DUP	10	--	5/3/2014	<0.00074
621048-043014-KW-B3-12.5	12.5	--	4/30/2014	<0.00070
621048-050114-KW-B4-32	32	--	5/1/2014	0.015 J
CB10-1-071210	3	--	7/12/2010	0.0020
CB10-2-071210	2.5	--	7/12/2010	0.0013 J
CB10-3-071210	3	--	7/12/2010	-
CB10-4-12-071410	12	--	7/14/2010	<0.00069
CB10-4-15-071410	15	--	7/14/2010	0.00098 J
CB10-5-071510-10	10	--	7/15/2010	-
CB10-5-071510-12	12	--	7/15/2010	-
CB10-6-071510-10	10	--	7/15/2010	-
CB10-6-071510-12	12	--	7/15/2010	0.0033
TB	--	--	7/8/2010	
EB -1	--	--	7/12/2010	<0.0000097
EB-2	--	--	7/15/2010	<0.0000096

Notes:

[ ] = Duplicate Sample Results

mg/kg= milligram per kilogram

ADEC = Alaska Department of Environmental Conservation

Bold = Value exceeds lab detection limit

Bold and Shaded= Value exceeds ADEC Soil Cleanup Level

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

-- = Not sampled/not measured/not available

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

UJ = The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

PAH = Polycyclic Aromatic Hydrocarbons by USEPA Method 8270

Attachment A.4. Soil Analytical Results - PCBs
Chevron Servise Station 306451
442 Gambell Street
Anchorage, Alaska

Soil Boring	Sample Depth (feet bgs)	Angled Depth (feet bgs)	Date	Aroclor-1016 (PCB-1016) (mg/kg)	Aroclor-1221 (PCB-1221) (mg/kg)	Aroclor-1232 (PCB-1232) (mg/kg)	Aroclor-1242 (PCB-1242) (mg/kg)	Aroclor-1248 (PCB-1248) (mg/kg)	Aroclor-1254 (PCB-1254) (mg/kg)	Aroclor-1260 (PCB-1260) (mg/kg)
ADEC Soil Cleanup Level				**--**	**--**	**--**	**--**	**--**	**--**	**--**
CB10-1-071210	3.0	--	7/12/2010	<0.0038 [<0.0037]	<0.0053 [<0.0052]	<0.0053 [<0.0052]	<0.0038 [<0.0037]	<0.0038 [<0.0037]	<0.0038 [<0.0037]	<0.0038 [<0.0037]
CB10-2-071210	2.5	--	7/12/2010	<0.0034	<0.0048	<0.0048	<0.0034	<0.0034	<0.0034	<0.0034
CB10-3-071210	3.0	--	7/12/2010	<0.0038	<0.0053	<0.0053	<0.0038	<0.0038	<0.0038	**0.11**
CB10-4-12-071410	12	--	7/14/2010	<0.0034 [<0.0034]	<0.0048 [<0.0048]	<0.0048 [<0.0048]	<0.0034 [<0.0034]	<0.0034 [<0.0034]	<0.0034 [<0.0034]	<0.0034 [<0.0034]
CB10-4-15-071410	15	--	7/14/2010	<0.0034	<0.0048	<0.0048	<0.0034	<0.0034	<0.0034	<0.0034
CB10-5-071510-10	10	--	7/15/2010	<0.0034	<0.0048	<0.0048	<0.0034	<0.0034	<0.0034	<0.0034
CB10-5-071510-12	12	--	7/15/2010	<0.0034	<0.0048	<0.0048	<0.0034	<0.0034	<0.0034	<0.0034
CB10-6-071510-10	10	--	7/15/2010	<0.0035	<0.0048	<0.0048	<0.0035	<0.0035	<0.0035	<0.0035
CB10-6-071510-12	12	--	7/15/2010	<0.0034	<0.0048	<0.0048	<0.0034	<0.0034	<0.0034	<0.0034
EB-1-071210**	--	--	7/12/2010	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096
EB-2-071510**	--	--	7/15/2010	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096	<0.000096

Notes:

[ ] = Duplicate Sample Results
mg/kg= milligram per kilogram
ADEC = Alaska Department of Environmental Conservation
Bold = Value exceeds lab detection limit
<0.0002 = Not detected at or above the reported detection limit (RDL)
-- = Not sampled/not measured/not available
[ ] = Duplicate Sample result
PCB = Polychlorinated Biphenyl
** = Units presented in mg/L (milligrams per liter)

ATTACHMENT B

Historical Groundwater Analytical Results

Attachment B.1 Historical Groundwater Analytical Results
Chevron Site No. 306451
442 Gambell Street
Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft)	DRO (mg/L)	GRO (mg/L)	TPH (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	1,2-Dibromoethane (mg/L)	1,2-Dichloroethane (mg/L)	Comments
			ADEC Groundwater Cleanup Level			1.5	2.2	--	0.0046	1.1	0.015	0.190	0.000075	0.0017	
MW-1	11/15/1986	97.95	34.43	0.00	63.52	--	--	**0.96**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-1	10/10/1987	97.95	34.43	0.00	63.52	--	--	**0.13**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-1	1/14/1988	97.95	34.22	0.00	63.73	--	--	**0.13**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-1	5/2/1988	97.95	--	--	--	--	--	**2.6**	**0.025**	<0.0002	**0.0002**	**0.0008**	--	--	
MW-1	10/24/1988	97.95	33.95	0.00	64.00	--	--	--	<0.0002	<0.0002	<0.0002	<0.0006	--	--	
MW-1	4/27/1990	97.95	31.83	0.00	66.12	--	--	**32.0**	<0.001	0.001	<0.001	**0.004**	--	--	
MW-1	12/15/1992	97.95	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/5/1994	97.95	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	1/24/1996	97.95	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	5/22/1997	97.95	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/13/1997	97.95	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/18/1998	97.95	34.99	0.00	62.96	**0.25**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-1	3/1/1999	97.95	35.16	0.00	62.79	<0.1	**0.151**	--	<0.0005	<0.0005	**0.00918**	**0.0287**	--	--	
MW-1	3/9/2005	98.27	34.36	0.00	63.91	**7.1**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-1	9/19/2006	98.27	34.97	0.00	63.30	**0.51**	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-1	6/28/2007	98.27	35.33	0.00	62.94	**0.56**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-1	8/16/2007	98.27	35.45	0.00	62.82	**0.13**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-1	6/3/2008	98.27	35.34	0.00	62.93	**1.0**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-1	8/12/2008	113.75	35.31	0.00	78.44	**0.1**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-1	6/18/2009	113.75	35.57	0.00	78.18	--	--	--	--	--	--	--	--	--	
MW-1	6/21/2010	113.75	35.82	0.00	77.93	--	--	--	--	--	--	--	--	--	
MW-1	8/7/2010	113.75	35.91	0.00	77.84	--	--	--	--	--	--	--	--	--	
MW-1	5/24/2011	113.75	36.24	0.00	77.51	--	--	--	--	--	--	--	--	--	
MW-1	9/20/2011	113.75	36.81	0.00	77.35	--	--	--	--	--	--	--	--	--	
MW-1	11/5/2012	113.75	35.33	0.00	78.42	--	--	--	--	--	--	--	--	--	
MW-1	11/5/2013	113.75	34.32	0.00	79.43	--	--	--	--	--	--	--	--	--	
MW-1	10/23/2015	113.75	34.95	0.00	78.80	--	--	--	--	--	--	--	--	--	
MW-1	7/28/2016	113.75	35.50	0.00	78.25	--	--	--	--	--	--	--	--	--	
MW-1	10/6/2017	113.75	35.51	0.00	78.24	--	--	--	--	--	--	--	--	--	
MW-1	9/6/2018	113.75	35.67	0.00	78.08	--	--	--	--	--	--	--	--	--	
MW-2	11/15/1986	98.83	35.50	0.00	63.33	--	--	**0.56**	--	--	--	--	--	--	
MW-2	10/10/1987	98.83	35.52	0.00	63.31	--	--	**0.12**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-2	1/14/1988	98.83	35.32	0.00	63.51	--	--	**0.14**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-2	5/2/1988	98.83	--	--	--	--	--	<0.5	<0.0002	<0.0002	<0.0002	<0.0006	--	--	
MW-2	10/24/1988	98.83	35.00	0.00	63.83	--	--	--	**0.0004**	**0.0023**	**0.0004**	**0.0015**	--	--	
MW-2	4/27/1990	98.83	32.01	0.00	66.82	--	--	**26.0**	<0.001	**0.003**	**0.006**	<0.001	--	--	
MW-2	12/15/1992	98.83	34.21	0.00	64.62	--	--	<1.0 / <1.0	<0.0003 / <0.0003	<0.0003 / <0.0003	<0.0003 / <0.0003	<0.0003 / <0.0003	--	--	
MW-2	12/5/1994	98.83	35.19	0.00	63.64	--	<0.1	<0.5	**0.0006**	<0.0005	<0.0005	<0.001	--	--	
MW-2	1/24/1996	98.83	35.82	0.00	63.01	**0.33**	<0.1	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-2	5/22/1997	98.83	36.51	0.00	62.32	<0.1	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-2	11/13/1997	98.83	35.64	0.00	63.19	**0.131**	<0.05	--	**0.00105**	**0.00246**	<0.0005	0.0012	--	--	
MW-2	12/18/1998	98.83	36.20	0.00	62.63	**0.242**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-2	3/1/1999	98.83	36.54	0.00	62.29	**0.107**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-2	3/9/2005	98.83	35.85	0.00	62.98	<0.4	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-2	9/19/2006	98.83	36.34	0.00	62.49	<0.15	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-2	6/28/2007	98.83	36.48	0.00	62.35	**0.045 / 0.085**	<0.01 / <0.01	--	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.002 / <0.002	--	--	
MW-2	8/16/2007	98.83	36.58	0.00	62.25	**0.06**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-2	6/3/2008	98.83	36.49	0.00	62.34	**0.03 / 0.03**	<0.01 / <0.01	--	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.002 / <0.002	--	--	
MW-2	8/12/2008	114.73	36.47	0.00	78.26	<0.05	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-2	6/18/2009	114.73	36.71	0.00	78.02	--	--	--	--	--	--	--	--	--	
MW-2	6/21/2010	114.73	36.94	0.00	77.79	--	--	--	--	--	--	--	--	--	
MW-2	8/7/2010	114.73	37.05	0.00	77.68	--	--	--	--	--	--	--	--	--	
MW-2	5/24/2011	114.73	37.33	0.00	77.40	--	--	--	--	--	--	--	--	--	
MW-2	9/20/2011	114.73	37.55	0.00	77.18	--	--	--	--	--	--	--	--	--	
MW-2	11/5/2012	114.73	36.48	0.00	78.25	--	--	--	--	--	--	--	--	--	
MW-2	11/5/2013	114.73	35.41	0.00	79.32	--	--	--	--	--	--	--	--	--	
MW-2	10/23/2015	114.73	36.04	0.00	78.69	--	--	--	--	--	--	--	--	--	
MW-2	7/28/2016	114.73	36.55	0.00	78.18	--	--	--	--	--	--	--	--	--	
MW-2	10/6/2017	114.73	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/6/2018	114.56	36.39	0.00	78.17	--	--	--	--	--	--	--	--	--	
MW-3	11/15/1986	98.82	36.10	0.00	62.72	--	--	**2.3**	**0.071 / 0.054**	**0.236 / 0.169**	**0.0077 / 0.0039**	**1.159 / 1.148**	--	--	
MW-3	10/10/1987	98.83	35.52	0.00	63.31	--	--	**0.1**	**0.0023**	**0.0038**	<0.001	**0.0473**	--	--	
MW-3	1/14/1988	98.86	35.92	0.00	62.94	--	--	**0.24**	**0.0052**	**0.0028**	**0.018**	**0.094**	--	--	
MW-3	5/2/1988	98.86	--	--	--	--	--	**0.8**	**0.033**	<0.001	**0.016**	**0.018**	--	--	
MW-3	10/24/1988	98.86	35.59	0.00	63.27	--	--	--	**0.028**	**0.042**	**0.120**	**0.530**	--	--	
MW-3	4/27/1990	98.86	33.56	0.00	65.30	--	--	**15.0**	**0.04**	**0.075**	**0.356**	**3.040**	--	--	
MW-3	12/15/1992	98.86	34.80	0.00	64.06	--	--	<1.0	<0.0003	**0.0056**	**0.110**	**0.600**	--	--	
MW-3	12/5/1994	98.86	35.74	0.00	63.12	--	**0.15**	1.0	<0.0005	<0.0005	**0.0058**	**0.016**	--	--	
MW-3	1/24/1996	98.86	35.82	0.00	63.04	**0.33 / 0.28**	<0.1 / <0.1	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--	--	
MW-3	5/22/1997	98.86	36.51	0.00	62.35	**0.171**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-3	11/13/1997	98.86	35.62	0.00	63.24	**0.295**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-3	12/18/1998	98.86	36.42	0.00	62.44	**0.486**	**21.5**	--	**11.3**	**0.018**	<0.01	<0.02	--	--	
MW-3	3/1/1999	98.86	36.54	0.00	62.32	**0.289 / 0.44**	**2.55 / 2.7**	--	**1.39 / 1.29**	<0.0005 / <0.01	<0.01 / 0.0138	0.0229 / 0.0154	--	--	
MW-3	3/9/2005	98.86	35.85	0.00	63.01	<0.4	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-3	9/19/2006	98.86	36.34	0.00	62.52	**0.066**	**0.01**	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-3	6/28/2007	98.86	36.69	0.00	62.17	**0.21**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-3	8/16/2007	98.86	37.82	0.00	61.04	**0.17**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-3	6/3/2008	98.86	36.72	0.00	62.14	**0.087**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-3	8/12/2008	114.38	36.70	0.00	77.68	<0.051	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	

Attachment B.1 Historical Groundwater Analytical Results
Chevron Site No. 306451
442 Gambell Street
Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft)	DRO (mg/L)	GRO (mg/L)	TPH (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	1,2-Dibromoethane (mg/L)	1,2-Dichloroethane (mg/L)	Comments
ADEC Groundwater Cleanup Level						**1.5**	**2.2**	**--**	**0.0046**	**1.1**	**0.015**	**0.190**	**0.000075**	**0.0017**	
MW-3	6/18/2009	114.38	36.91	0.00	77.47	**0.061 J / 0.27 J**	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-3	9/13/2009	114.38	36.97	0.00	77.41	**0.060 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-3	6/21/2010	114.38	37.50	0.00	76.88	**0.13 J / 0.26 J**	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-3	8/7/2010	114.38	37.30	0.00	77.08	**0.12 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-3	3/6/2011	114.38	37.50	0.00	76.88	**0.077 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-3	5/24/2011	114.38	--	0.00	--	--	--	--	--	--	--	--	--	--	
MW-3	9/20/2011	114.38	37.75	0.00	76.63	**0.058 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-3	11/5/2012	114.38	36.68	0.00	77.70	**0.15 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0000097/<0.0000097	<0.0005/<0.0005	
MW-3	11/5/2013	114.38	35.67	0.00	78.71	--	--	--	--	--	--	--	--	--	
MW-3	10/23/2015	114.38	36.31	0.00	78.07	--	--	--	--	--	--	--	--	--	
MW-3	7/28/2016	114.38	36.77	0.00	77.61	--	--	--	--	--	--	--	--	--	
MW-3	10/6/2017	114.38	36.84	0.00	77.54	--	--	--	--	--	--	--	--	--	
MW-3	9/6/2018	114.38	36.97	0.00	77.41	--	--	--	--	--	--	--	--	--	
MW-4	11/15/1986	98.13	35.31	0.00	62.82	--	--	**5.7**	**0.0018**	**0.004**	<0.001	**0.0093**	--	--	
MW-4	10/10/1987	98.13	--	--	--	--	--	**0.29**	<0.001	<0.001	<0.001	<0.001	--	--	
MW-4	1/15/1988	98.13	35.14	0.00	62.99	--	--	**0.16**	<0.001	**0.0022**	<0.001	<0.001	--	--	
MW-4	5/2/1988	98.13	--	--	--	--	--	**0.6**	**2.700**	**0.036**	**0.180**	**0.820**	--	--	
MW-4	10/24/1988	98.13	34.78	0.00	63.35	--	--	--	**0.0004**	**0.0095**	**0.0013**	**0.0077**	--	--	
MW-4	4/27/1990	98.13	32.79	0.00	65.34	--	--	**12.0**	**0.001**	<0.001	<0.001	<0.001	--	--	
MW-4	12/15/1992	98.13	34.75	0.00	63.38	--	--	<1.0	<0.0003	<0.0003	<0.0003	<0.0003	--	--	
MW-4	12/5/1994	98.13	34.98	0.00	63.15	--	<0.1	<0.5	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-4	1/24/1996	98.13	35.06	0.00	63.07	**0.73**	<0.1	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-4	5/22/1997	98.13	35.55	0.00	62.58	**0.271**	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-4	11/13/1997	98.13	35.45	0.00	62.68	**0.309**	<0.05	--	<0.0005	**0.000525**	<0.0005	**0.00155**	--	--	
MW-4	12/18/1998	98.13	35.92	0.00	62.21	**0.420**	<0.05 / <0.05	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	--	--	
MW-4	3/1/1999	98.13	36.04	0.00	62.09	**0.160**	<0.05	--	<0.0005	**0.00148**	**0.000549**	**0.00196**	--	--	
MW-5	5/22/1997	98.61	35.65	0.00	62.96	**0.18**	**6.170**	--	**1.750**	**0.806**	**0.0227**	**0.0368**	--	--	
MW-5	7/8/1997	98.61	--	--	--	<0.0001	**5.010**	--	**1.730**	**1.190**	**0.0226**	**0.0857**	--	--	
MW-5	11/13/1997	98.61	35.30	0.00	63.31	**0.163**	**2.110**	--	**0.547**	**0.442**	**0.0152**	**0.0645**	--	--	
MW-5	12/18/1998	98.13	35.92	0.00	62.21	--	--	--	--	--	--	--	--	--	
MW-6	5/22/1997	99.06	36.28	0.00	62.78	**0.647**	**0.318** / <0.05	--	**0.0118** / <0.0005	**0.00133** / <0.0005	**0.000617** / <0.0005	**0.0161** / <0.001	--	--	
MW-6	7/8/1997	99.06	--	--	--	**0.129**	**0.0662 / 0.250**	--	**0.0107 / 0.0367**	<0.0005 / 0.00149	<0.0005 / 0.000861	0.00555 / 0.022	--	--	
MW-6	11/13/1997	99.06	35.95	0.00	63.11	**0.232**	**0.347**	--	**0.0969**	**0.00376**	<0.0005	**0.00926**	--	--	
MW-6	12/18/1998	99.06	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	05/22/1997	98.83	35.96	0.00	62.87	**0.185**	<0.05	--	<0.0005	**0.000759**	<0.0005	<0.001	--	--	
MW-7	7/8/1997	98.83	--	--	--	<0.1	<0.05	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	
MW-7	11/13/1997	98.83	35.63	0.00	63.20	<0.1	<0.05	--	**0.00470**	<0.0005	<0.0005	<0.001	--	--	
MW-7	12/18/1998	98.83	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/9/2005	99.45	--	--	--	<0.4	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	9/19/2006	99.45	--	--	--	<0.12	<0.01	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-8	6/28/2007	99.45	37.02	0.00	62.43	<0.024	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-8	8/16/2007	99.45	37.14	0.00	62.31	**0.028** / <0.023	<0.01 / <0.01	--	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.002 / <0.002	--	--	
MW-8	6/3/2008	99.45	37.04	0.00	62.41	**0.024**	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
MW-8	8/12/2008	114.92	37.01	0.00	77.91	<0.049 / <0.049	<0.01 / <0.01	--	<0.001 / <0.001	<0.001 / <0.001	<0.001 / <0.001	<0.002 / <0.002	--	--	
MW-8	6/18/2009	114.92	37.23	0.00	77.69	<0.048	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	9/13/2009	114.92	37.29	0.00	77.63	**0.058 J** / <0.049	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-8	6/21/2010	114.92	37.16	0.00	77.76	<0.049	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	8/7/2010	114.92	37.59	0.00	77.33	**0.20 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	3/6/2011	114.92	37.80	0.00	77.12	**0.15 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	5/24/2011	114.92	37.90	0.00	77.02	**0.22 J / 0.16 J**	<0.010 / <0.010	--/--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-8	9/20/2011	114.92	38.07	0.00	76.85	<0.050 / <0.052	<0.010 / <0.010	--/--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-8	11/5/2012	114.92	36.98	0.00	77.94	<0.048	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-8	11/5/2013	114.92	35.98	0.00	78.94	--	--	--	--	--	--	--	--	--	
MW-8	11/7/2013	--	--	--	--	--	--	--	<0.00024	<0.00023	<0.00024	<0.00072	--	--	
MW-8	5/5/2014	114.92	35.81	0.00	79.11	--	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	
MW-8	5/5/2014	114.92	35.81	0.00	79.11	--	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	sample collected via HydroSleeve
MW-8	10/23/2015	114.92	36.58	0.00	78.34	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-8	7/28/2016	114.92	37.09	0.00	77.83	**0.026 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-8	10/6/2017	114.92	37.10	0.00	77.82	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
MW-8	9/6/2018	114.92	37.26	0.00	77.66	--	--	--	<0.0002	<0.0002	<0.0002	<0.0005	<0.0003	<0.002	
MW-9	08/08/2010	115.28	37.36	0.00	77.92	**0.12 J / 0.14 J**	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-9	3/6/2011	115.28	37.58	0.00	77.70	**0.092 J / 0.072 J**	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	--	--	
MW-9	5/24/2011	115.28	37.69	0.00	77.59	**0.13 J**	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-9	9/20/2011	115.28	37.86	0.00	77.42	<0.048	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
MW-9	11/5/2012	115.28	36.76	0.00	78.52	<0.053 / <0.048	<0.010/<0.010	--	<0.0005/<0.0005	<0.0005/<0.0005	<0.0005/<0.0005	<0.0015/<0.0015	--	--	
MW-9	11/5/2013	115.28	35.74	0.00	79.54	--	--	--	--	--	--	--	--	--	
MW-9	11/7/2013	--	--	--	--	--	--	--	<0.00024 / <0.00024	<0.00023 / <0.00023	<0.00024 / <0.00024	<0.00072 / <0.00072	--	--	
MW-9	5/5/2014	115.28	35.57	0.00	79.71	--	--	--	<0.00015 / <0.00015	<0.00011 / <0.00011	<0.00016 / <0.00016	<0.00040 / <0.00040	--	--	
MW-9	5/5/2014	115.28	35.57	0.00	79.71	--	--	--	<0.00015 / <0.00015	<0.00011 / <0.00011	<0.00016 / <0.00016	<0.00040 / <0.00040	--	--	sample collected via HydroSleeve
MW-9	10/23/2015	115.28	36.34	0.00	78.94	--	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	--	--	
MW-9	7/28/2016	115.28	36.87	0.00	78.41	<0.026 /< 0.026	<0.010 / <0.010	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	--	--	
MW-9	10/6/2017	115.28	36.88	0.00	78.40	--	--	--	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	--	--	
MW-9	9/6/2018	115.28	37.01	0.00	78.27	--	--	--	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0002 / <0.0002	<0.0005 / <0.0005	<0.0003 / <0.0003	<0.002 / <0.002	
Trip Blank	12/18/1998	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.001	--	--	

Attachment B.1 Historical Groundwater Analytical Results
Chevron Site No. 306451
442 Gambell Street
Anchorage, Alaska

Well ID	Sample Date	TOC (ft)	DTW (ft bTOC)	LNAPL Thickness (ft)	GW Elev (ft)	DRO (mg/L)	GRO (mg/L)	TPH (mg/L)	B (mg/L)	T (mg/L)	E (mg/L)	X (mg/L)	1,2-Dibromoethane (mg/L)	1,2-Dichloroethane (mg/L)	Comments
ADEC Groundwater Cleanup Level						**1.5**	**2.2**	**--**	**0.0046**	**1.1**	**0.015**	**0.190**	**0.000075**	**0.0017**	
Trip Blank	3/1/1999	--	--	--	--	--	<0.005	--	<0.0005	0.000742	<0.0005	<0.001	--	--	
Trip Blank	8/16/2007	--	--	--	--	--	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
Trip Blank	6/3/2008	--	--	--	--	--	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
Trip Blank	8/12/2008	--	--	--	--	--	<0.01	--	<0.001	<0.001	<0.001	<0.002	--	--	
Trip Blank	6/18/2009	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	9/13/2009	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	6/10/2010	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	8/7/2010	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	3/6/2011	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	5/24/2011	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	9/20/2011	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	--	--	
Trip Blank	11/5/2012	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0015	<0.0000097	<0.0005	
Trip Blank	11/7/2013	--	--	--	--	--	--	--	<0.00024	<0.00023	<0.00024	<0.00072	--	--	
Trip Blank	5/5/2014	--	--	--	--	--	--	--	<0.00015	<0.00011	<0.00016	<0.00040	--	--	
Trip Blank	10/23/2015	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
Trip Blank	7/28/2016	--	--	--	--	--	<0.010	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
Trip Blank	10/6/2017	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	--	
Trip Blank	9/6/2018	--	--	--	--	--	--	--	<0.0002	<0.0002	<0.0002	<0.0005	<0.0003	<0.002	

Notes:

ID = Identification
MW = Groundwater monitoring well
TMW = Temporary Groundwater monitoring well
TOC = Top of casing
DTW = Depth to groundwater
ft bTOC = Feet below top of casing
ft = Feet
x / y = Duplicate Sample Results
GW Elev = Groundwater elevation
mg/L= Milligrams per Liter
ADEC = Alaska Department of Environmental Conservation
Bold = Value exceeds lab detection limit
Bold and Shaded= Value exceeds ADEC Groundwater Cleanup Level
<0.0002 = Not detected at or above the method detection limit (MDL)
-- = Not sampled/not measured/not available
LNAPL = Light non-aqueous phase liquid
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only.
B = Compound considered non-detect at the listed value due to associated blank contamination.
GRO = Gasoline Range Organics by Alaska Series Method AK101
DRO = Diesel Range Organics by Alaska Series Method AK102 and 103
Samples analyzed by USEPA (United States Environmental Protect Act) Method SW-846 8260C:
Benzene, Toluene, Ethylbenzene and Total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
EDC = 1,2 Dicholoroethane
Ethylene Dibromide

Attachment B.2 Historical Groundwater Analytical Results - PAHs
Chevron Site No. 306451
442 Gambell Street
Anchorage, Alaska

Sample	Well ID	MW-9
	Date	08/08/10
	ADEC Groundwater Cleanup Level (mg/L)	(mg/L)
Naphthalene	**0.73**	0.000023 J / 0.000029 J
Acenaphthylene	**2.2**	<0.000010 / <0.000010
Acenaphthene	**2.2**	<0.000010 / <0.000010
Fluorene	**1.5**	<0.000010 / <0.000010
Phenanthrene	**11**	0.00030 J / 0.000036 J
Anthracene	**11**	<0.000010 / <0.000010
Fluoranthene	**1.5**	<0.000010 / <0.000010
Pyrene	**1.1**	0.000014 J / 0.000015 J
Benzo(a)anthracene	**0.0012**	<0.000010 / <0.000010
Chrysene	**0.12**	<0.000010 / <0.000010
Benzo(b)fluoranthene	**0.0012**	<0.000010 / <0.000010
Benzo(k)fluoranthene	**0.012**	<0.000010 / <0.000010
Benzo(a)pyrene	**0.002**	<0.000010 / <0.000010
Indeno(1,2,3-cd)pyrene	**0.0012**	<0.000010 / <0.000010
Dibenz(a,h)anthracene	**0.00012**	<0.000010 / <0.000010
Benzo(g,h,i)perylene	**1.1**	<0.000010 / <0.000010

Notes:

ID = Identification

MW = Groundwater monitoring well

PAH = Polynuclear aromatic hydrocarbons

x / y = Duplicate Sample Results

mg/L= Milligrams per Liter

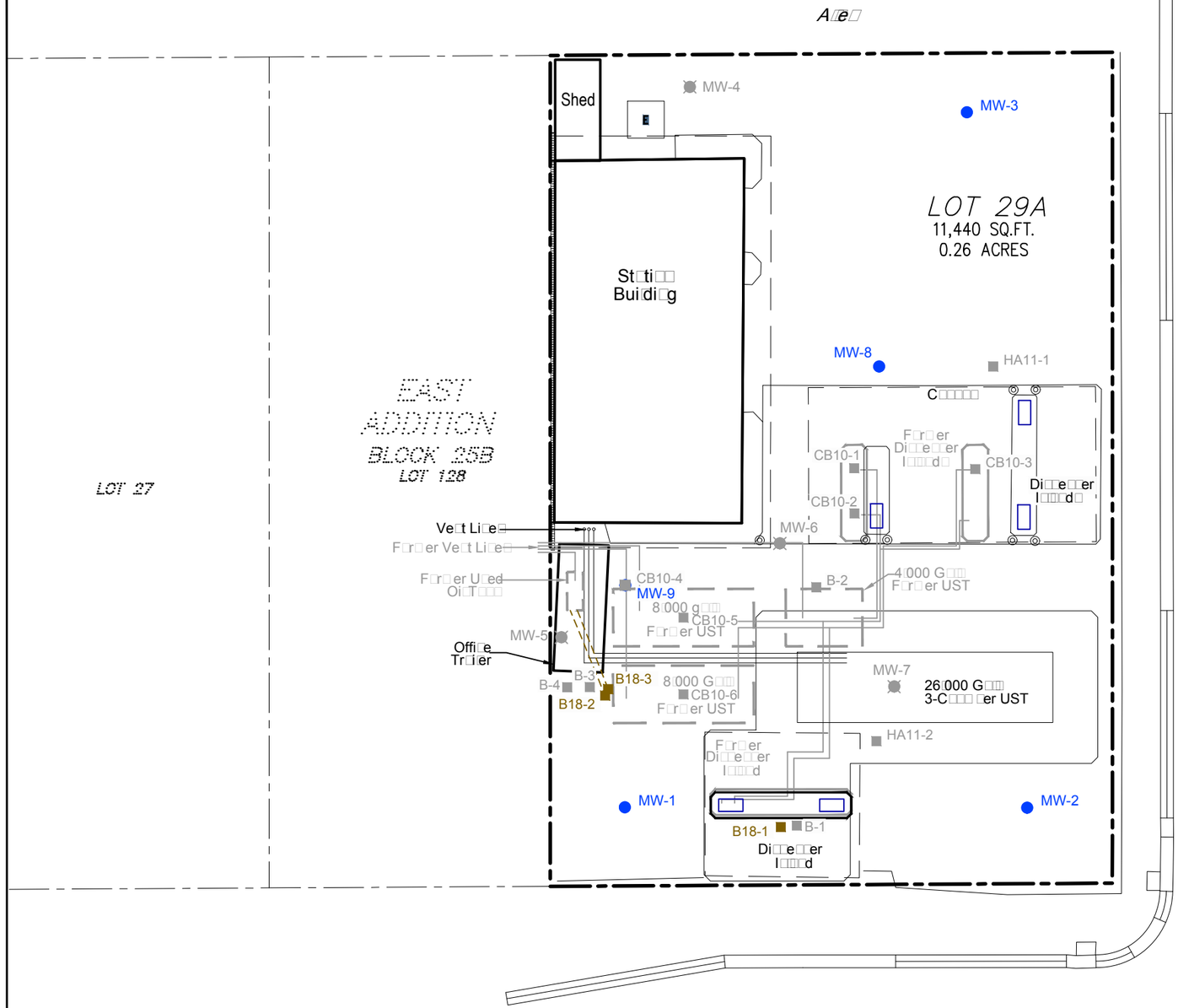
ADEC = Alaska Department of Environmental Conservation

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

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

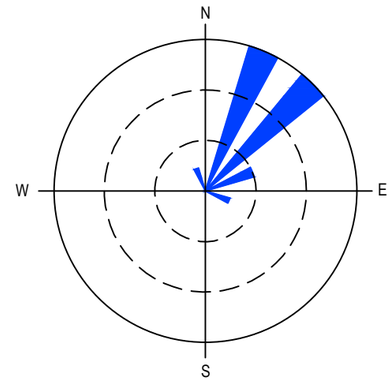
ATTACHMENT C

Historical Figures



LEGEND

- MONITORING WELL LOCATION
- DESTROYED WELL LOCATION
- SOIL BORING LOCATION
- SOIL BORING LOCATION (2018)



Historical Groundwater Flow Direction
(2005 - 2018)

0 10 20ft

FORMER UNOCAL 5580/CLINE'S TESORO
442 GAMBELL STREET
ANCHORAGE ALASKA

SITE PLAN

621048-2018 1
N 13 2018

FIGURE 2

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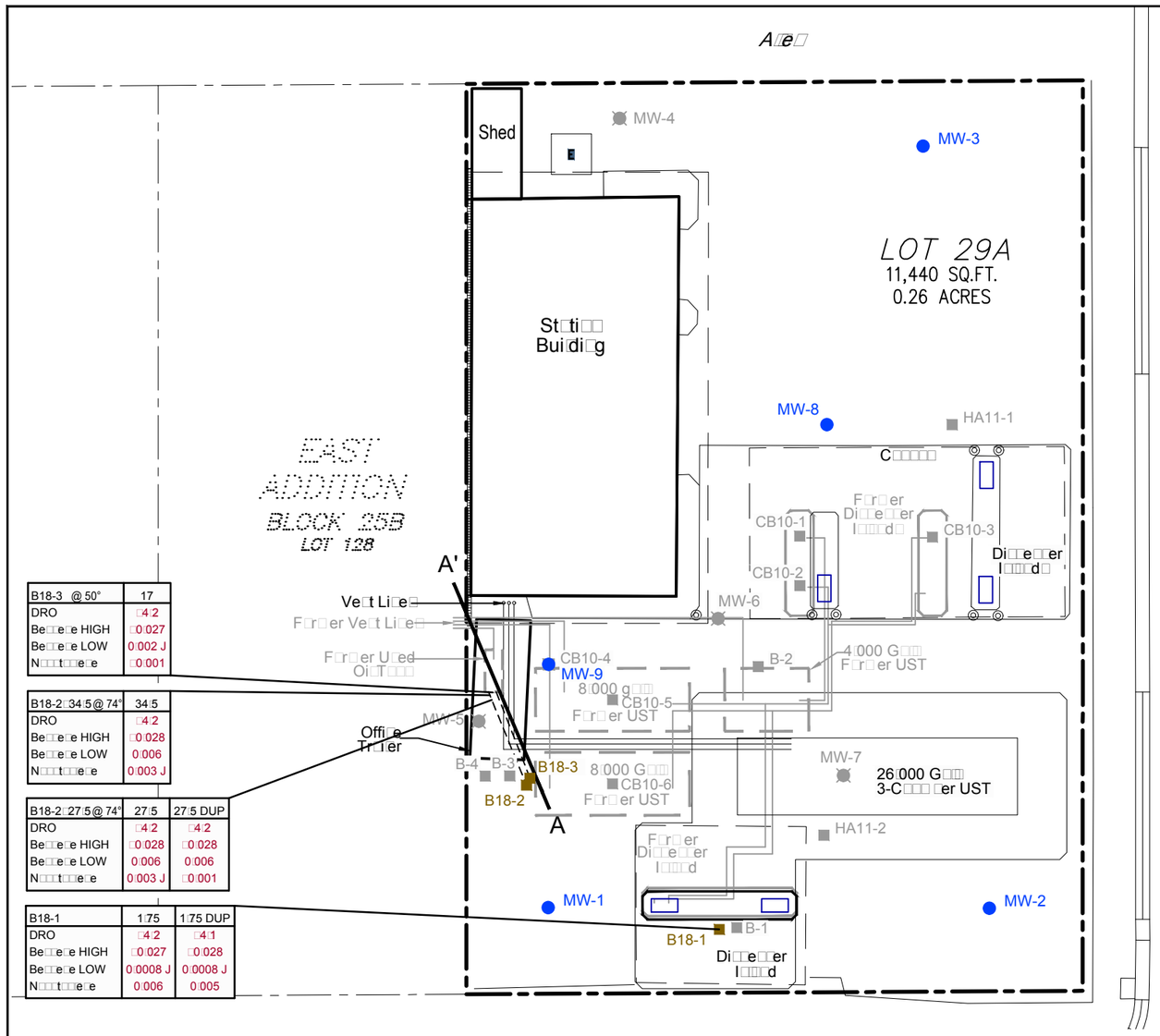


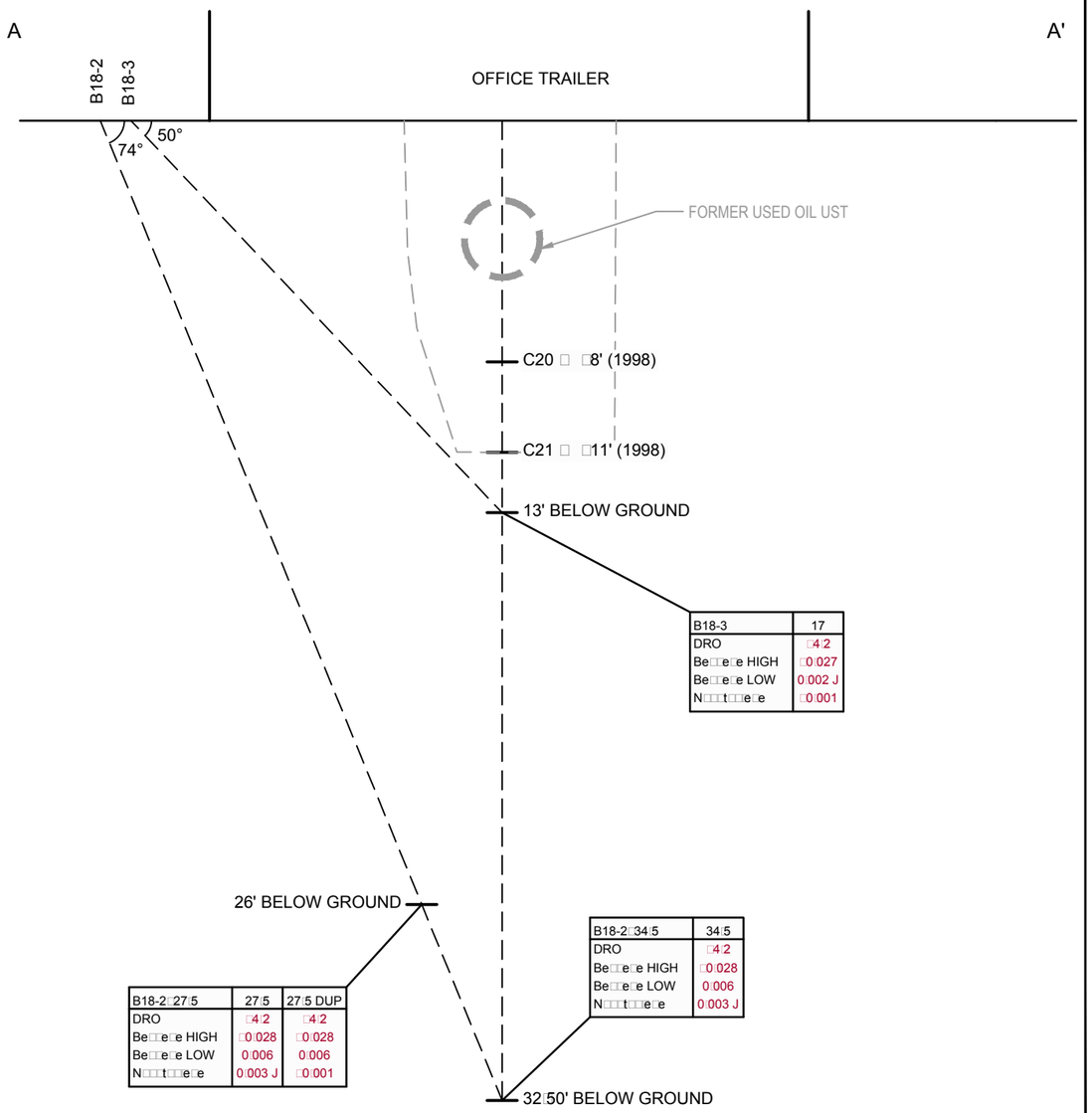
B18-3 @ 50°	17
DRO	4,200
Benzene HIGH	0.027
Benzene LOW	0.002 J
Naphthalene	0.001

B18-2 34.5 @ 74°	34.5
DRO	4,200
Benzene HIGH	0.028
Benzene LOW	0.006
Naphthalene	0.003 J

B18-2 27.5 @ 74°	27.5	27.5 DUP
DRO	4,200	4,200
Benzene HIGH	0.028	0.028
Benzene LOW	0.006	0.006
Naphthalene	0.003 J	0.001

B18-1	1.75	1.75 DUP
DRO	4,200	4,100
Benzene HIGH	0.027	0.028
Benzene LOW	0.0008 J	0.0008 J
Naphthalene	0.006	0.005

A — A'



B18-3	17
DRO	4,200
Benzene HIGH	0.027
Benzene LOW	0.002 J
Naphthalene	0.001

B18-2 34.5	34.5
DRO	4,200
Benzene HIGH	0.028
Benzene LOW	0.006
Naphthalene	0.003 J

B18-2 27.5	27.5	27.5 DUP
DRO	4,200	4,200
Benzene HIGH	0.028	0.028
Benzene LOW	0.006	0.006
Naphthalene	0.003 J	0.001

B18-1	1.75	1.75 DUP
DRO	4,200	4,100
Benzene HIGH	0.027	0.028
Benzene LOW	0.0008 J	0.0008 J
Naphthalene	0.006	0.005

BOREHOLE DESIGNATION
SAMPLE DEPTH (FEET BELOW GRADE SAMPLE DISTANCE IN LINEAR FEET FOR ANGLE BORINGS)
RESULT (MILLIGRAMS PER KILOGRAM)
PARAMETER

DUP	DUPLICATE SAMPLE
J	ESTIMATED VALUE BETWEEN METHOD DETECTION LIMIT AND LABORATORY REPORTING LIMIT
DRO	DIESEL RANGE ORGANICS
Benzene LOW	LOW LEVEL ANALYTICAL METHOD
Benzene HIGH	HIGH LEVEL ANALYTICAL METHOD

CROSS-SECTION SCHEMATIC

SCALE 1" 5' (VERTICAL AND HORIZONTAL)

0 10 20ft

LEGEND

- MONITORING WELL LOCATION
- DESTROYED WELL LOCATION
- SOIL BORING LOCATION
- SOIL BORING LOCATION (2018)

A — A' CROSS SECTION LOCATION

GHD

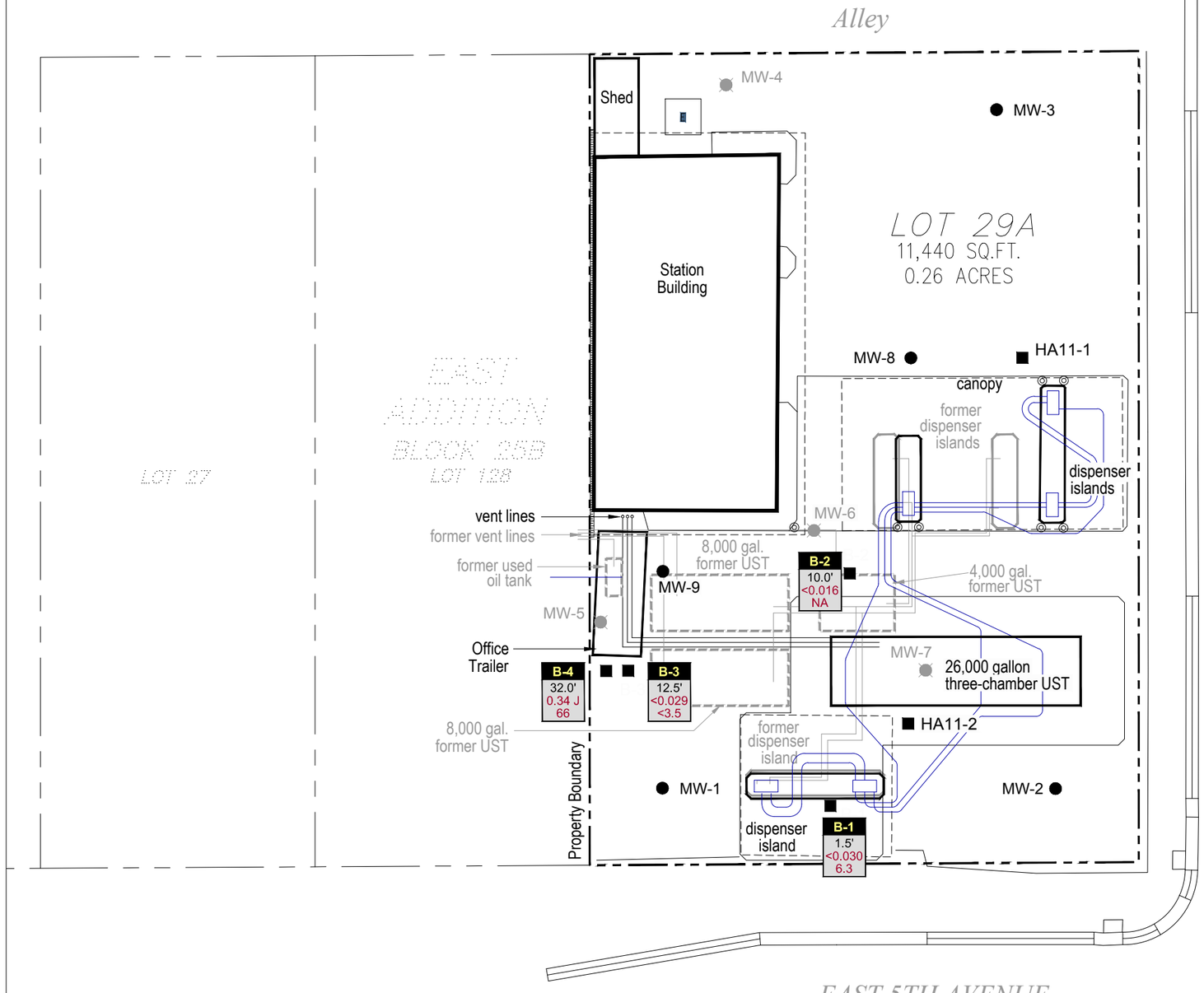
FORMER UNOCAL 5580/CLINE'S TESORO
442 GAMBELL STREET
ANCHORAGE ALASKA

621048-2018.1
NOV 22 2018

HYDROCARBON CONCENTRATIONS IN SOIL - MAY 2018

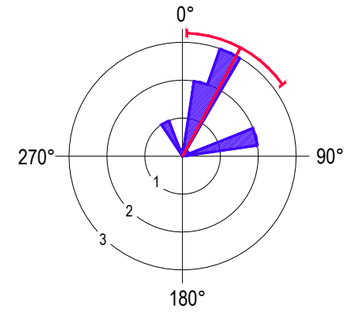
FIGURE 3

CAD File: P:\drawing\621000\621048\621048-REPORTS\621048-2018.1(026)\621048-2018.1(026)GN\621048-2018.1(026)GN-WA003.DWG

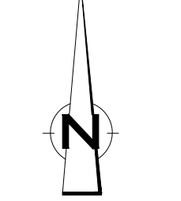


EXPLANATION

- MONITORING WELL LOCATION
- DESTROYED WELL LOCATION
- SOIL BORING LOCATION
- ID / DEPTH / BENZ / DRO — WELL DESIGNATION / GROUNDWATER ELEVATION (MSL) / BENZENE CONCENTRATION (µg/L) / DRO CONCENTRATION (µg/L)
- J — ESTIMATED VALUE BETWEEN METHOD DETECTION LIMIT AND LABORATORY REPORTING LIMIT
- NA — NOT AVAILABLE



Historical Groundwater Flow Direction



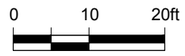


Figure 2

PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL
CLINE'S TESORO - FORMER UNOCAL STATION 5580
442 GAMBELL STREET
Anchorage, Alaska
May 1-3, 2014

621048-2014(016)GN-EM002 JUN 20/2014

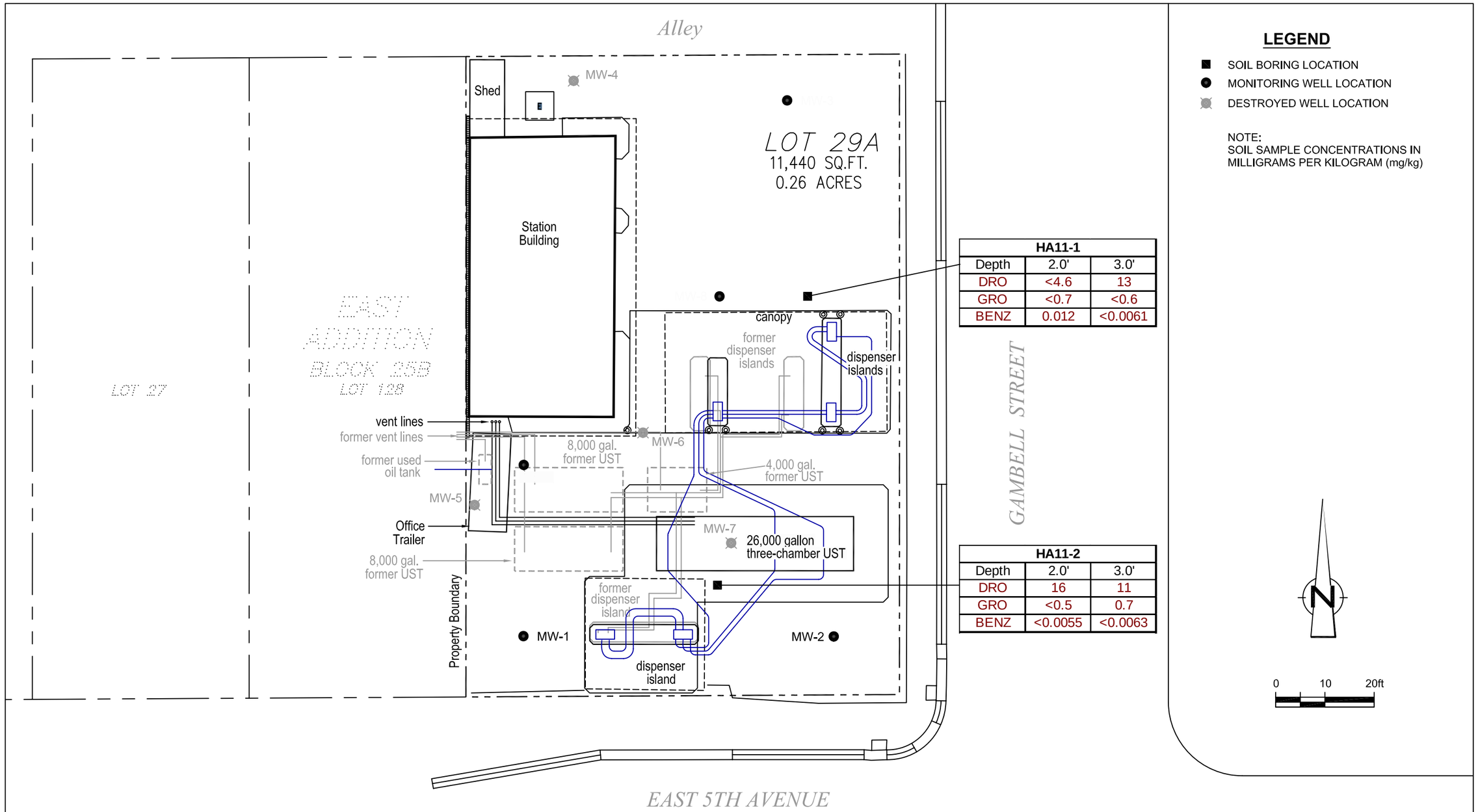
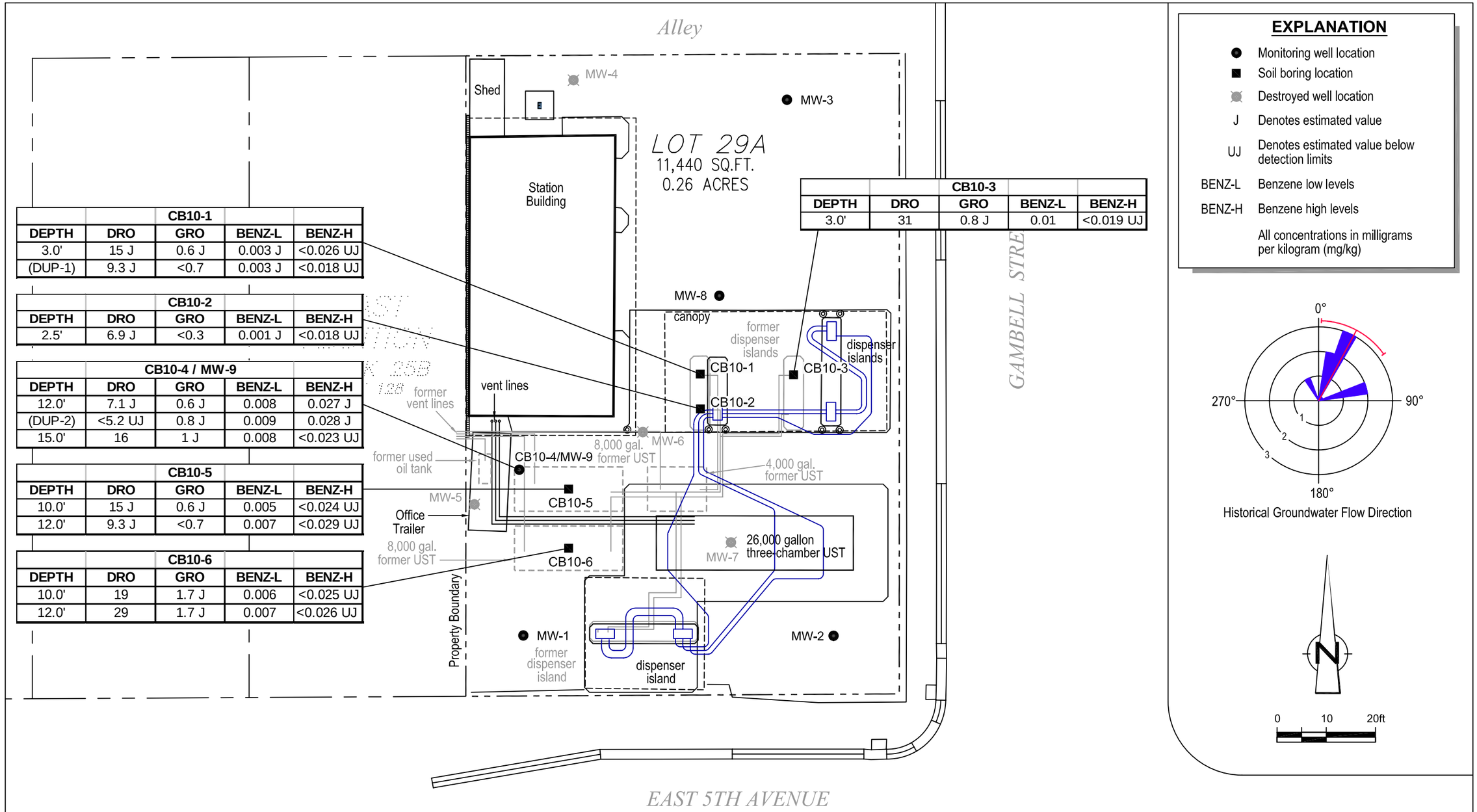


Figure 2

PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL
CLINE'S TESORO - FORMER UNOCAL STATION 5580
442 GAMBELL STREET
Anchorage, Alaska
September 19, 2011

621048_95(012)GN-DN002 DEC 5/2011



CB10-1				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
3.0'	15 J	0.6 J	0.003 J	<0.026 UJ
(DUP-1)	9.3 J	<0.7	0.003 J	<0.018 UJ

CB10-2				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
2.5'	6.9 J	<0.3	0.001 J	<0.018 UJ

CB10-4 / MW-9				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
12.0'	7.1 J	0.6 J	0.008	0.027 J
(DUP-2)	<5.2 UJ	0.8 J	0.009	0.028 J
15.0'	16	1 J	0.008	<0.023 UJ

CB10-5				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
10.0'	15 J	0.6 J	0.005	<0.024 UJ
12.0'	9.3 J	<0.7	0.007	<0.029 UJ

CB10-6				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
10.0'	19	1.7 J	0.006	<0.025 UJ
12.0'	29	1.7 J	0.007	<0.026 UJ

CB10-3				
DEPTH	DRO	GRO	BENZ-L	BENZ-H
3.0'	31	0.8 J	0.01	<0.019 UJ

EXPLANATION

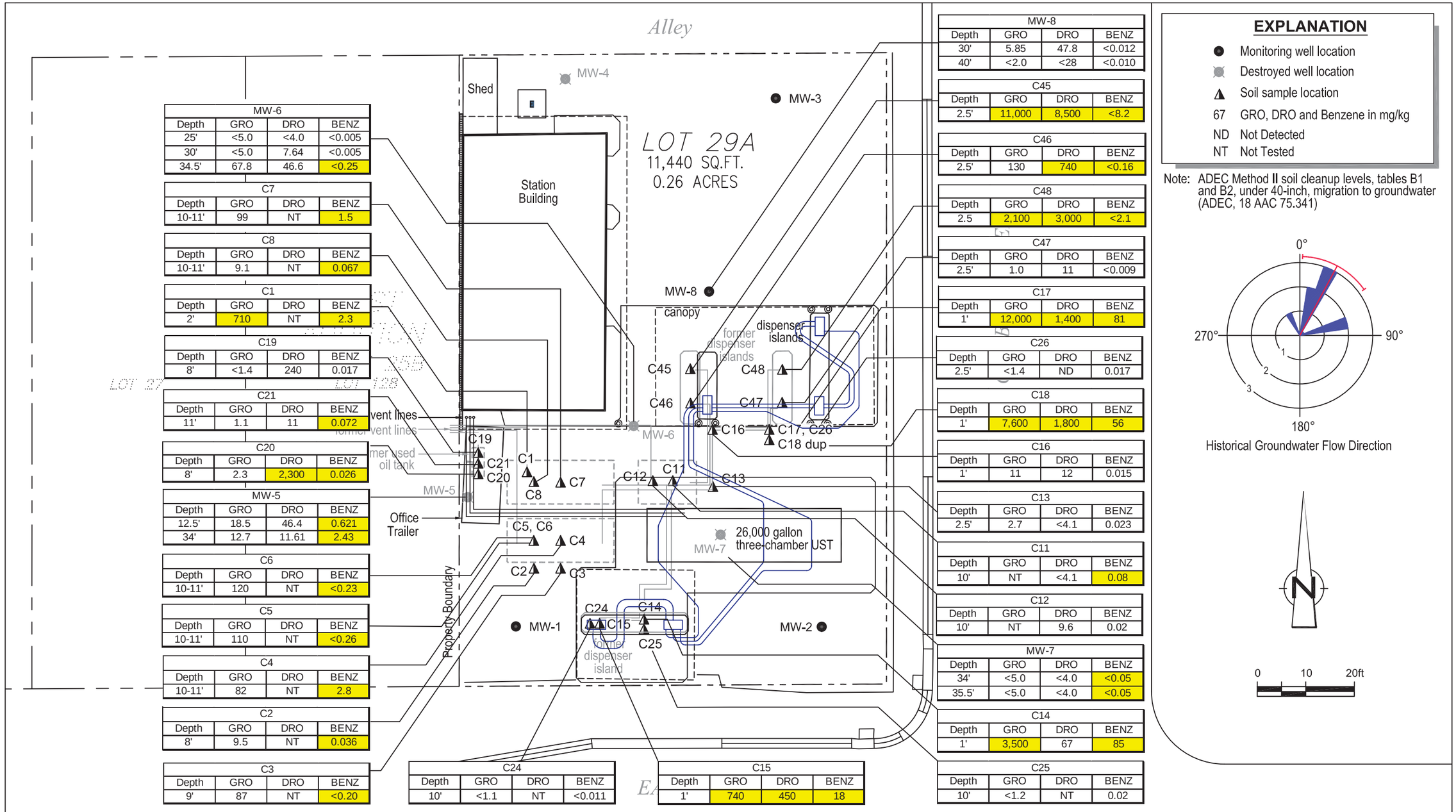
- Monitoring well location
- Soil boring location
- Destroyed well location
- J — Denotes estimated value
- UJ — Denotes estimated value below detection limits
- BENZ-L — Benzene low levels
- BENZ-H — Benzene high levels

All concentrations in milligrams per kilogram (mg/kg)

Historical Groundwater Flow Direction

Figure 2

HYDROCARBON CONCENTRATIONS IN SOIL
CLINE'S TESORO - FORMER UNOCAL STATION 5580
442 GAMBELL STREET
Anchorage, Alaska
July 12-15, 2010



MW-6			
Depth	GRO	DRO	BENZ
25'	<5.0	<4.0	<0.005
30'	<5.0	7.64	<0.005
34.5'	67.8	46.6	<0.25

C7			
Depth	GRO	DRO	BENZ
10-11'	99	NT	1.5

C8			
Depth	GRO	DRO	BENZ
10-11'	9.1	NT	0.067

C1			
Depth	GRO	DRO	BENZ
2'	710	NT	2.3

C19			
Depth	GRO	DRO	BENZ
8'	<1.4	240	0.017

C21			
Depth	GRO	DRO	BENZ
11'	1.1	11	0.072

C20			
Depth	GRO	DRO	BENZ
8'	2.3	2,300	0.026

MW-5			
Depth	GRO	DRO	BENZ
12.5'	18.5	46.4	0.621
34'	12.7	11.61	2.43

C6			
Depth	GRO	DRO	BENZ
10-11'	120	NT	<0.23

C5			
Depth	GRO	DRO	BENZ
10-11'	110	NT	<0.26

C4			
Depth	GRO	DRO	BENZ
10-11'	82	NT	2.8

C2			
Depth	GRO	DRO	BENZ
8'	9.5	NT	0.036

C3			
Depth	GRO	DRO	BENZ
9'	87	NT	<0.20

C24			
Depth	GRO	DRO	BENZ
10'	<1.1	NT	<0.011

C15			
Depth	GRO	DRO	BENZ
1'	740	450	18

MW-8			
Depth	GRO	DRO	BENZ
30'	5.85	47.8	<0.012
40'	<2.0	<28	<0.010

C45			
Depth	GRO	DRO	BENZ
2.5'	11,000	8,500	<8.2

C46			
Depth	GRO	DRO	BENZ
2.5'	130	740	<0.16

C48			
Depth	GRO	DRO	BENZ
2.5	2,100	3,000	<2.1

C47			
Depth	GRO	DRO	BENZ
2.5'	1.0	11	<0.009

C17			
Depth	GRO	DRO	BENZ
1'	12,000	1,400	81

C26			
Depth	GRO	DRO	BENZ
2.5'	<1.4	ND	0.017

C18			
Depth	GRO	DRO	BENZ
1'	7,600	1,800	56

C16			
Depth	GRO	DRO	BENZ
1'	11	12	0.015

C13			
Depth	GRO	DRO	BENZ
2.5'	2.7	<4.1	0.023

C11			
Depth	GRO	DRO	BENZ
10'	NT	<4.1	0.08

C12			
Depth	GRO	DRO	BENZ
10'	NT	9.6	0.02

MW-7			
Depth	GRO	DRO	BENZ
34'	<5.0	<4.0	<0.05
35.5'	<5.0	<4.0	<0.05

C14			
Depth	GRO	DRO	BENZ
1'	3,500	67	85

C25			
Depth	GRO	DRO	BENZ
10'	<1.2	NT	0.02

EXPLANATION

- Monitoring well location
- Destroyed well location
- Soil sample location
- 67 GRO, DRO and Benzene in mg/kg
- ND Not Detected
- NT Not Tested

Note: ADEC Method **II** soil cleanup levels, tables B1 and B2, under 40-inch, migration to groundwater (ADEC, 18 AAC 75.341)

Historical Groundwater Flow Direction

ADEC CLEAN-UP LEVELS	
GRO	300
DRO	250
BENZENE	0.025

Location	Date Sampled
MW-1 thru MW-4	1986
MW-5 thru MW-7	1997
C1 thru C25	1998
MW-8	2005

Figure 3

HISTORICAL PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL
CLINE'S TESORO - FORMER UNOCAL STATION 5580
442 GAMBELL STREET
Anchorage, Alaska

Z:\DENVER\Alaska Diamond Projects\30-6451 (SS #5580) ANCHORAGE, AK\\FIGURES\621048_HC-SOIL.DWG

Alley

Shed

MW-4

MW-3

MW-3
77.41
NS

LOT 29A
11,440 SQ.FT.
0.26 ACRES

Station Building

77.60

77.60

77.80

MW-8

HA11-1

Canopy

EAST ADDITION
BLOCK 25B
LOT 12B

LOT 27

78.00

0.01

Former Dispenser Islands

MW-8
77.66
<0.0002

Dispenser Islands

77.80

Vent Lines

Former Vent Lines

78.20

MW-6

Former Used Oil Tank

MW-9

MW-9	
78.27	DUP
<0.0002	<0.0002

4,000 Gal. Former UST

78.00

8,000 gal. Former UST

78.20

B-4

8,000 Gal. Former UST

MW-7

26,000 Gal. 3-Chamber UST

HA11-2

Former Dispenser Island

MW-1

MW-1
78.08
NS

Dispenser Island

MW-2

MW-2
78.17
NS

GAMBELL STREET

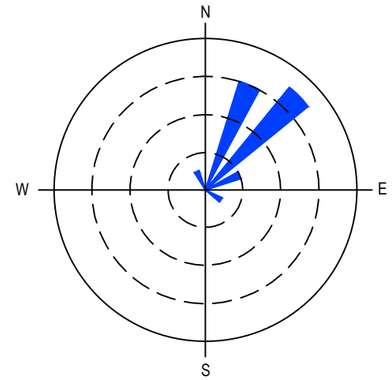
EAST 5TH AVENUE

LEGEND

- MONITORING WELL LOCATION
- DESTROYED WELL LOCATION
- SOIL BORING LOCATION
- 77.80 — GROUNDWATER ELEVATION CONTOUR, IN FEET ABOVE MEAN SEA LEVEL (FT MSL), DASHED WHERE INFERRED
- 0.02 — GROUNDWATER FLOW DIRECTION AND GRADIENT

MW-8	WELL DESIGNATION
77.82	GROUNDWATER ELEVATION (FT MSL)
<0.0005	BENZENE CONCENTRATION (µg/L)

- \- NOT MEASURED
- NS NOT SAMPLED
- DUP DUPLICATE SAMPLE



Historical Groundwater Flow Direction
(2005 - 2018)

0 10 20ft

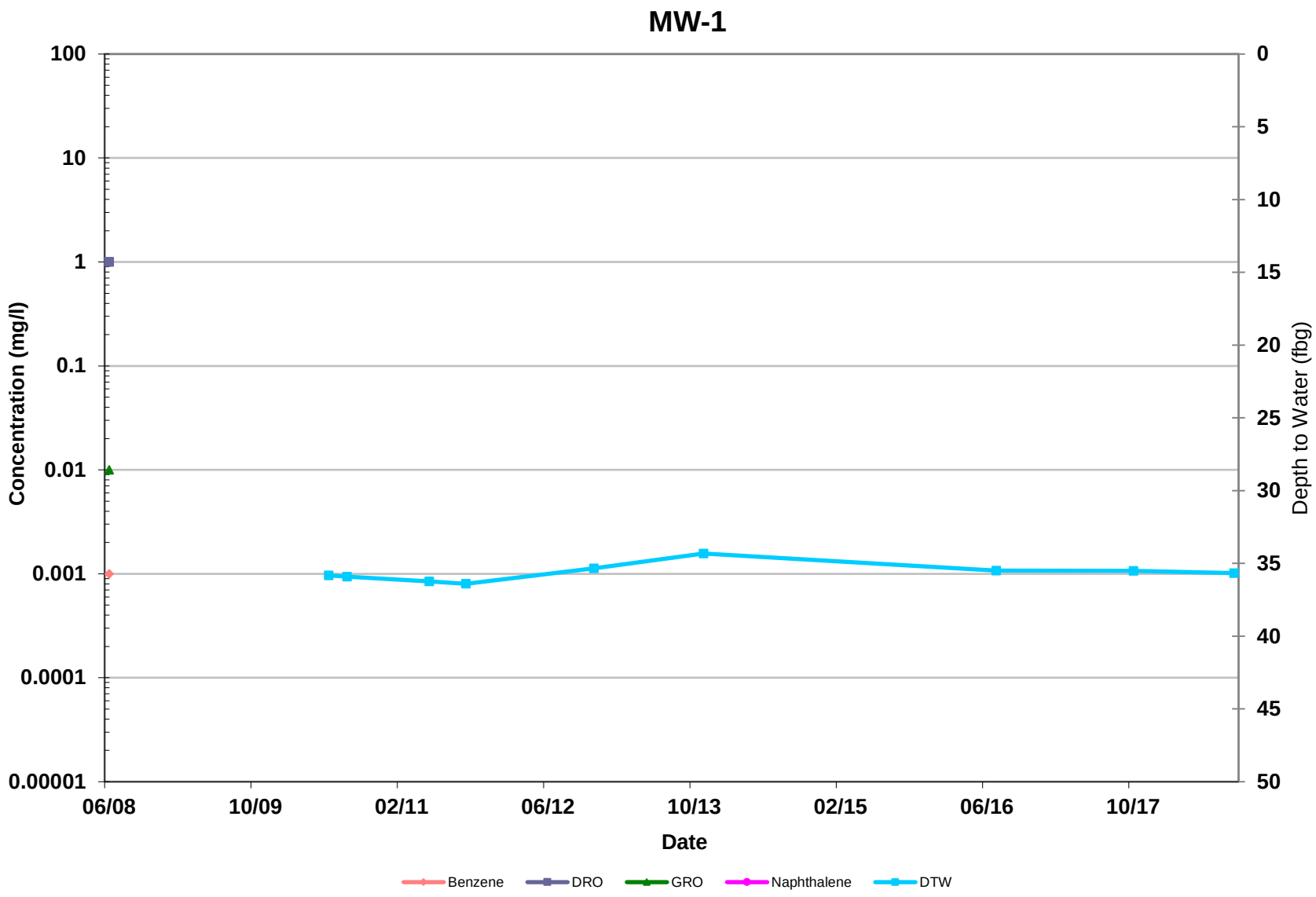
FORMER UNOCAL #5580/CLINE'S TESORO
442 GAMBELL STREET
ANCHORAGE, ALASKA

GROUNDWATER ELEVATION CONTOUR AND PETROLEUM HYDROCARBON CONCENTRATION MAP - SEPTEMBER 6, 2018

621048-940418
Nov 13, 2018

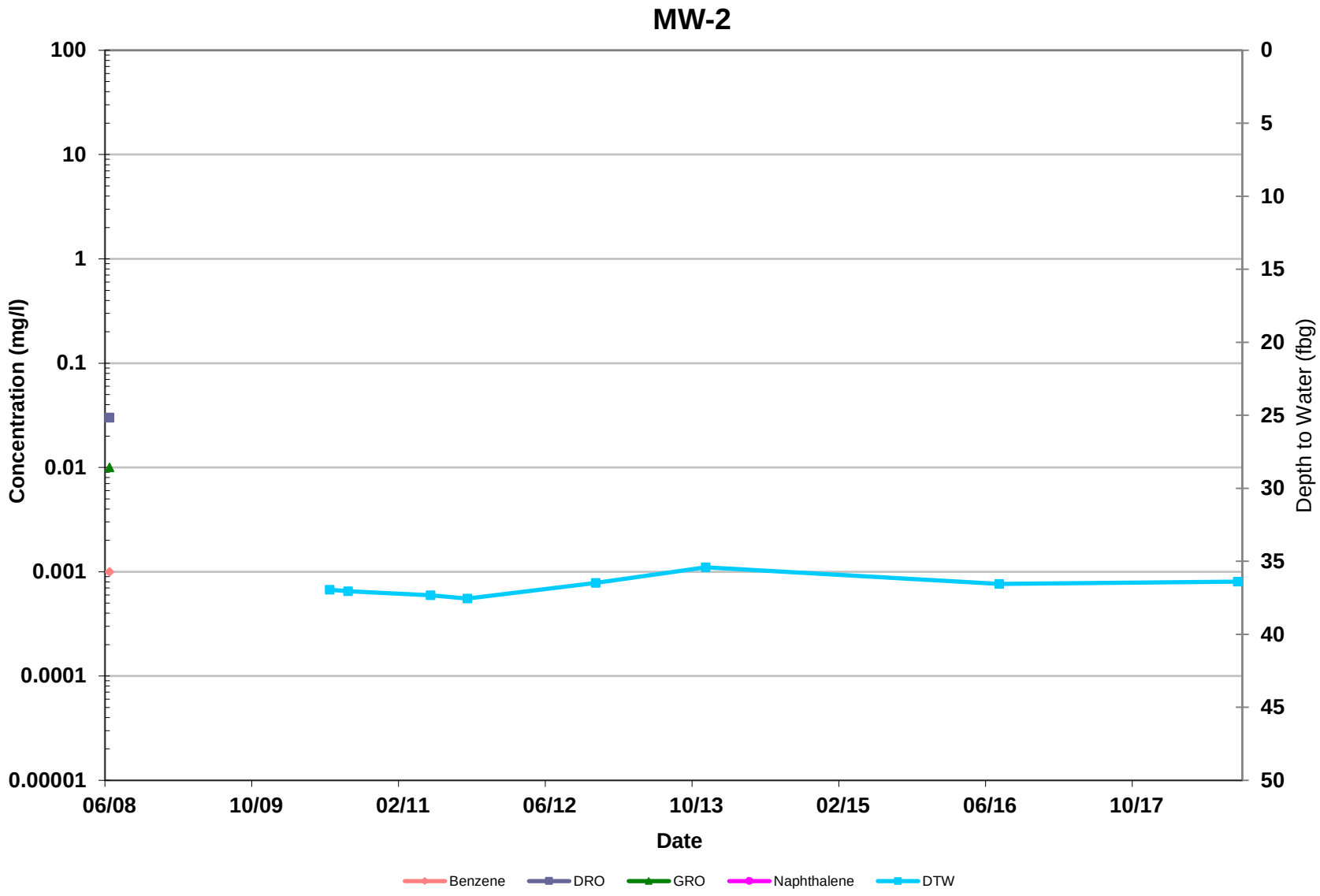
FIGURE 2

CAD File: \\wat-fs2\shared\CAD\drawings\621000s\621048\621048-REPORTS\621048-940418(027)\621048-940418(027)GN\621048-940418(027)GN-WA002.DWG



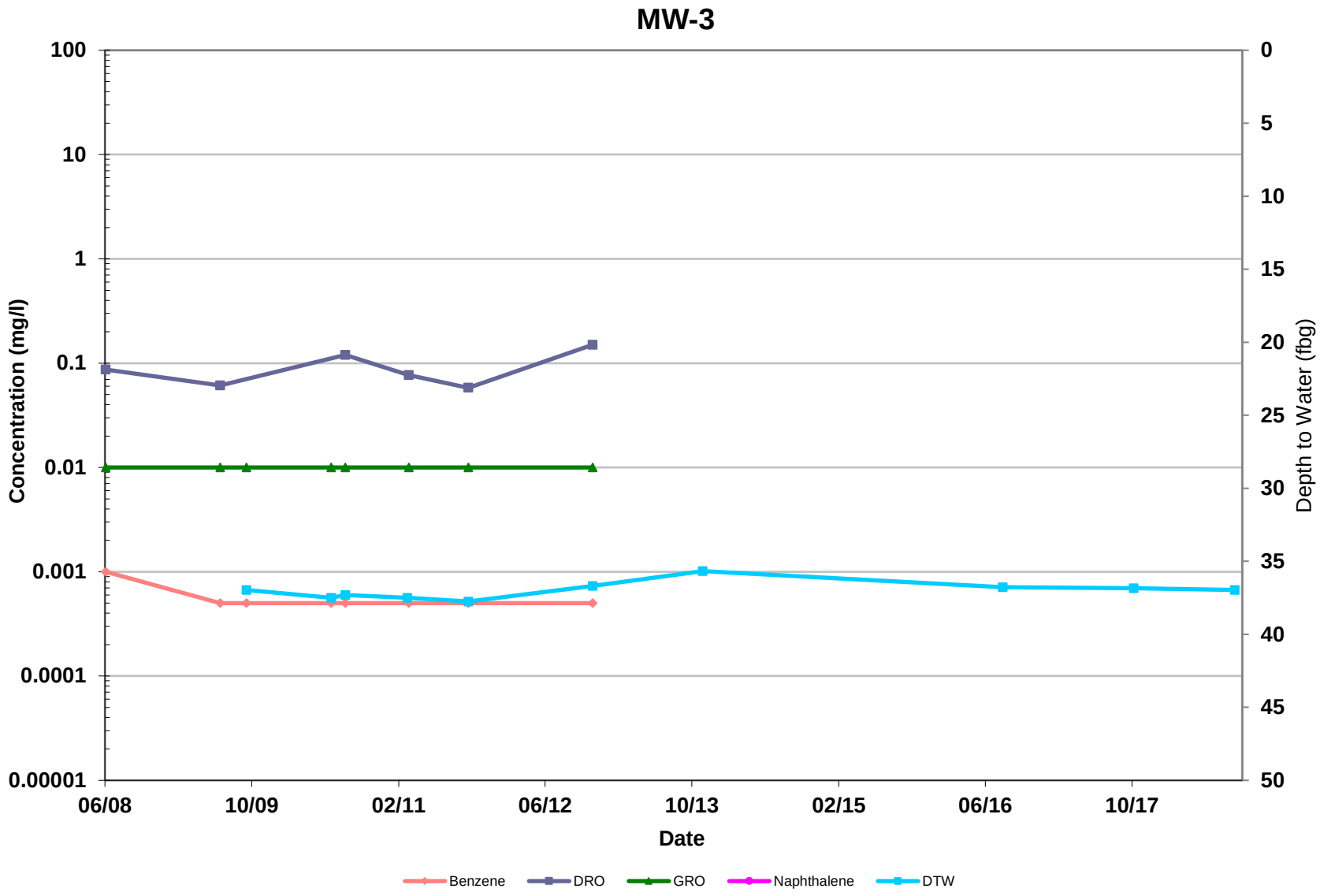
GHD

Former Unocal #5580/ Cline's Tesoro
442 Gambell Street
Anchorage, Alaska



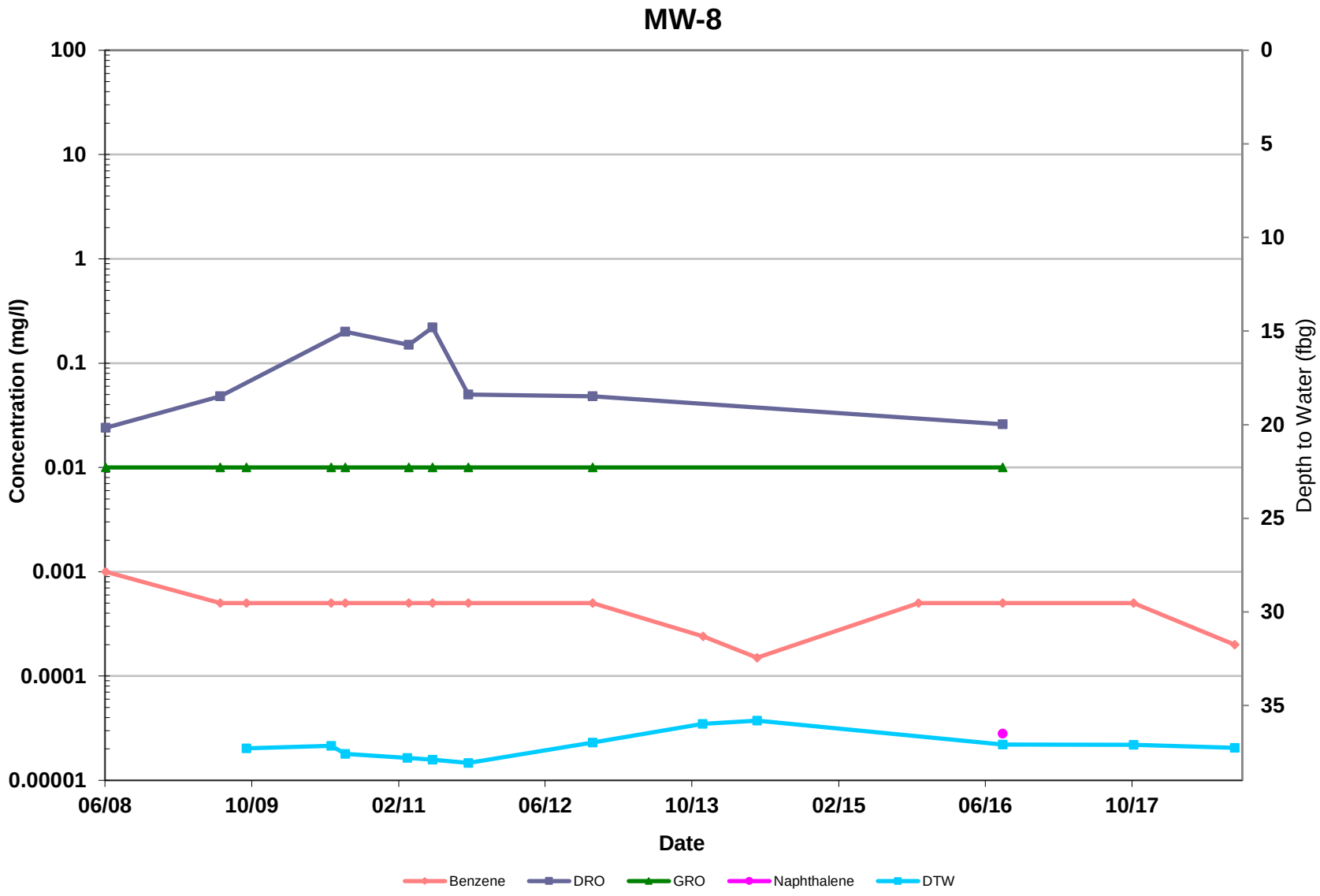
GHD

Former Unocal #5580/ Cline's Tesoro
442 Gambell Street
Anchorage, Alaska



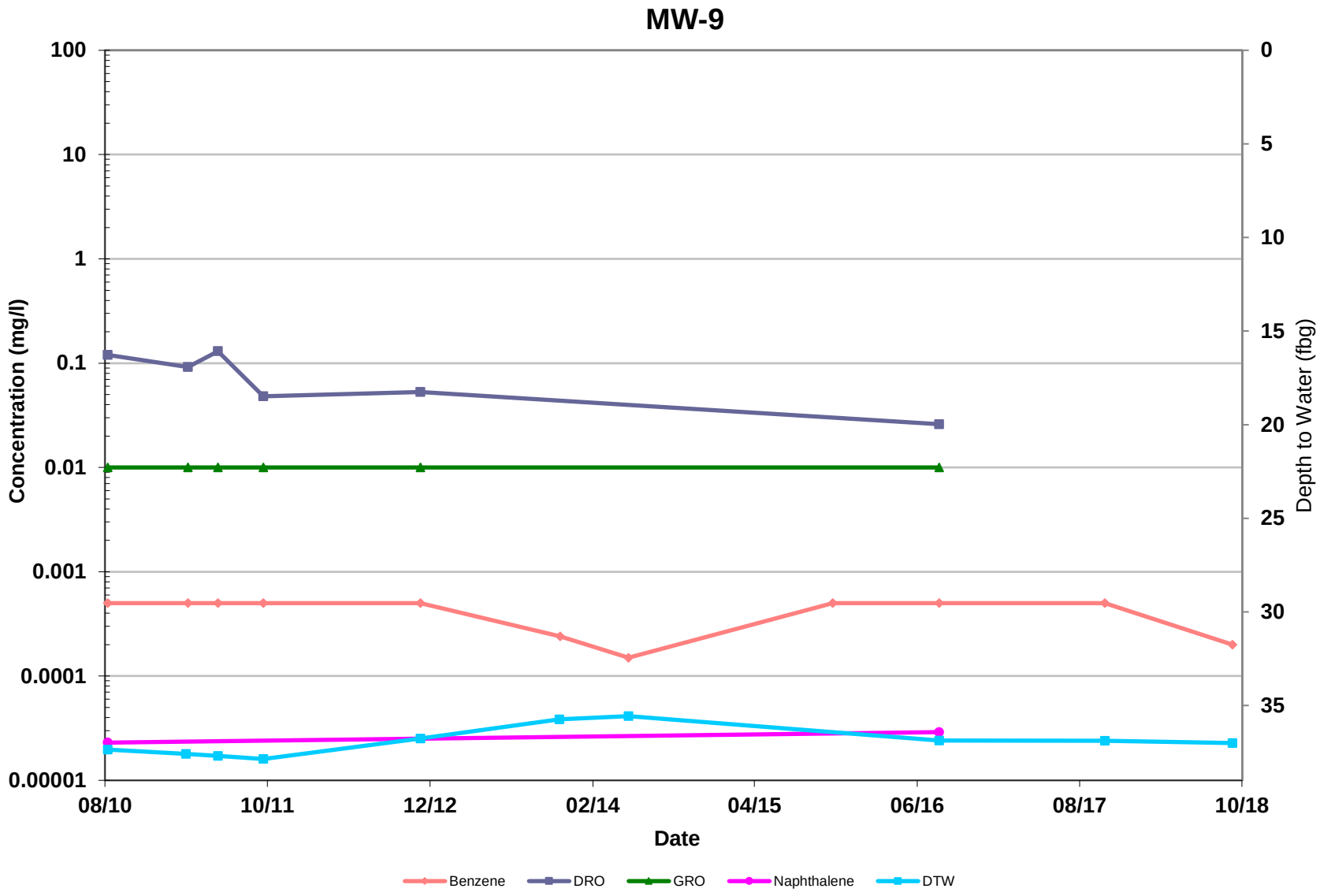
GHD

Former Unocal #5580/ Cline's Tesoro
442 Gambell Street
Anchorage, Alaska



GHD

Former Unocal #5580/ Cline's Tesoro
442 Gambell Street
Anchorage, Alaska



Former Unocal #5580/ Cline's Tesoro
442 Gambell Street
Anchorage, Alaska

ATTACHMENT D

Conceptual Site Model

Print Form

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

Site Name: Chevron - 306451

File Number: 2100.26.112

Completed by: Arcadis US, 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: Incomplete

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: Incomplete

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: Incomplete

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: Incomplete

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:

None of the above criteria applies to Site 306451

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:

None of the above criteria applies to Site 306451

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:

None of the above criteria applies to Site 306451

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:

None of the above criteria applies to Site 306451

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

Print Form

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Chevron 306451
File ID: 2100.26.112

Completed By: Arcadis US, Inc.
Date Completed: 03/04/2020

***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.

(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

Media	Transport Mechanisms	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
☑ Surface Soil (0-2 ft bgs)	☑ Direct release to surface soil — check soil	☑ soil	☑ Incidental Soil Ingestion	I	I	I	I			
	☐ Migration to subsurface — check soil		☑ Dermal Absorption of Contaminants from Soil	I	I	I	I			
	☐ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☐ 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	☑ groundwater	☑ Ingestion of Groundwater	I	I	I	I			
	☑ Migration to groundwater — check groundwater		☐ Dermal Absorption of Contaminants in Groundwater							
	☑ Volatilization — check air		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Ground-water	☑ Direct release to groundwater — check groundwater	☑ air	☑ Inhalation of Outdoor Air	I	I	I	I			
	☑ Volatilization — check air		☑ Inhalation of Indoor Air	I	I	I	I			
	☐ Flow to surface water body — check surface water		☐ Inhalation of Fugitive Dust							
	☐ Flow to sediment — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water	☐ surface water	☐ Ingestion of Surface Water							
	☐ Volatilization — check air		☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Sedimentation — check sediment		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment	☐ sediment	☐ Direct Contact with Sediment							
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota	☐ biota	☐ Ingestion of Wild or Farmed Foods							
	☐ Other (list):									

Revised, 10/01/2010

ATTACHMENT E

Cumulative Risk Assessment

Chemicals of Concern	Exposure Media	Heath Effect (Risk Driver)[1]	Maximum Current Site Concentration (µg/L)	Risk-Based Concentration[2]	1/10th Risk-Based Concentration[3]	COPC Selection[3]
DRO	Groundwater	nc	150	1500	150	No
GRO	Groundwater	nc	1	2200	220	No
Benzene	Groundwater	ca	0.2	4.6	0.46	No
Toluene	Groundwater	nc	0.2	1100	110	No
Ethylbenzene	Groundwater	ca	0.2	15	1.5	No
Total Xylenes	Groundwater	nc	0.5	190	19	No
Chloroform	Groundwater	ca	2	2.2	0.22	Yes
1,2-Dichloroethane	Groundwater	ca	2	1.7	0.17	Yes
1,2-Dibromoethane	Groundwater	ca	0.3	0.075	0.0075	Yes
					Total Number of Selected COPCs	**3**

Notes:

1. Health Effect Classifications are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Table C (18 AAC 75.341 Groundwater Cleanup Levels). carcinogen (c); noncarcinogen (nc); mutagen (m)
2. Risk-Based Concentrations are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Table C (18 AAC 75.341 Groundwater Cleanup Levels).
3. Groundwater concentrations exceeding one-tenth of the Risk-Based Concentrations are selected as COPCs to be included in the cumulative risk calculations.

ADEC = Alaska Department of Environmental Conservation
COPC = Chemical of Potential Concern
µg/L = microgram per liter

Chemicals of Potential Concern[1]	Exposure Media	Exposure Route	Maximum Current Site Concentration (µg/L)	Risk-Based Concentration[2]	Hazard Quotients[3]
Non-Carcinogenic					
1,2-Dichloroethane	Groundwater	Oral	2[4]	120	-
		Dermal		2820	-
		Inhalation		14.6	-
1,2-Dibromoethane	Groundwater	Oral	0.3[4]	180	-
		Dermal		3600	-
		Inhalation		18.8	-
Chloroform	Groundwater	Oral	2	201	0.0100
		Dermal		2530	0.00079
		Inhalation		204	0.0098
				Hazard Index:	**2E-02**

Notes:

1. Chemical of Potential Concern (COPC) selection is found on Table 1.
2. Risk-Based Concentrations for non-carginogenic exposure routes are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Appendix B
3. Hazard Quotient (HQ) is the maximum site concentration divided by the applicable RBC. The hazard index (HI) is the sum of all HQs multipled by the risk management level of 1.
4. This concentration is the laboratory method detection limit used in place of a non-detect value. Elevated detection limits should not be used when determining cumulative risk.

ADEC = Alaska Department of Environmental Conservation
RBC = Risk-Based Concentration
HI = Hazard Index
HQ = Hazard Quotient
µg/L = microgram per liter

Chemicals of Potential Concern[1]	Exposure Media	Exposure Route	Maximum Current Site Concentration (µg/L)	Risk-Based Concentration[2]	Site Concentration/ RBC[3]
Carcinogenic					
1,2-Dichloroethane	Groundwater	Oral	2[4]	8.56	-
		Dermal		184	-
		Inhalation		2.16	-
1,2-Dibromoethane	Groundwater	Oral	0.3[4]	0.39	-
		Dermal		7.14	-
		Inhalation		0.0936	-
Chloroform	Groundwater	Oral	2	25.1	0.080
		Dermal		292	0.0068
		Inhalation		2.44	0.82
				Cumulative Carcinogenic Risk:	**9E-06**

Notes:

1. Chemical of Potential Concern (COPC) selection is found on Table 1.
2. Risk-Based Concentrations for carginogenic exposure routes are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Appendix B
3. Site Concentration/RBC is the maximum site concentration divided by the applicable RBC. The cumulative carcinogenic risk is the sum of all COPCs and exposure routes multipled by the risk management level of $1x10^{-5}$.
4. This concentration is the laboratory method detection limit used in place of a non-detect value. Elevated detection limits should not be used when determining cumulative risk.

ADEC = Alaska Department of Environmental Conservation

RBC = Risk-Based Concentration

µg/L = microgram per liter

Chemicals of Concern	Exposure Media	Heath Effect (Risk Driver)[1]	Maximum Current Site Concentration (mg/kg)	Risk-Based Concentration[2]	1/10th Risk-Based Concentration[3]	COPC Selection[3]
DRO	Soil	nc	4.2	250	25	No
GRO	Soil	nc	0.7	300	30	No
Benzene	Soil	ca	0.29	11	1.1	No
Toluene	Soil	nc	0.055	5800	580	No
Ethylbenzene	Soil	ca	0.057	49	4.9	No
Total Xylenes	Soil	nc	0.057	490	49	No
Lead	Soil	nc	88	400	40	Yes
Naphthalene	Soil	ca	0.006	29	2.9	No
1,1,1-Trichloroethane	Soil	nc	0.053	11000	1100	No
1,1,2,2-Tetrachloroethane	Soil	ca	0.059	6.1	0.61	No
1,1,2-Trichloroethane	Soil	nc	0.059	1.6	0.16	No
1,1-Dichloroethane	Soil	ca	0.059	46	4.6	No
1,1-Dichloroethene	Soil	nc	0.059	330	33	No
1,2-Dibromoethane	Soil	ca	0.054	0.42	0.042	Yes
1,2-Dichlorobenzene	Soil	nc	0.059	1600	160	No
1,2-Dichloroethane	Soil	ca	0.059	5.5	0.55	No
1,2-Dichloropropane	Soil	nc	0.059	17	1.7	No
1,3-Dichlorobenzene	Soil	nc	0.059	1400	140	No
1,4-Dichlorobenzene	Soil	ca	0.059	21	2.1	No
Bromodichloromethane	Soil	ca	0.059	3.6	0.36	No
Bromoform	Soil	ca	0.059	240	24	No
Bromomethane	Soil	nc	0.12	10	1	No
Carbon Tetrachloride	Soil	ca	0.059	9.1	0.91	No
Chlorobenzene	Soil	nc	0.12	250	25	No
Chloroethane	Soil	nc	0.093	20000	2000	No
Chloroform	Soil	ca	0.059	4	0.4	No
Chloromethane	Soil	nc	0.12	170	17	No
cis-1,2-Dichloroethene	Soil	nc	0.059	200	20	No
cis-1,3-Dichloropropene	Soil	-	0.059	-	-	No
Dibromochloromethane	Soil	ca	0.12	110	11	No
Methylene Chloride	Soil	nc	0.11	460	46	No
Tetrachloroethene	Soil	nc	0.059	95	9.5	No
trans-1,2-Dichloroethene	Soil	nc	0.059	2000	200	No
trans-1,3-Dichloropropene	Soil	-	0.059	-	-	No
Trichloroethene	Soil	nc	0.12	4.9	0.49	No
Trichlorofluoromethane	Soil	nc	0.12	30000	3000	No
Trifluorotrichloroethane	Soil	-	0.11	-	-	No
Vinyl Chloride	Soil	ca	0.059	0.65	0.065	No
Acenaphthylene	Soil	nc	0.0004	2300	230	No
Acenaphthalene	Soil	-	0.0004	-	-	No
Anthracene	Soil	nc	0.0007	23000	2300	No

Chemicals of Concern	Exposure Media	Heath Effect (Risk Driver)[1]	Maximum Current Site Concentration (mg/kg)	Risk-Based Concentration[2]	1/10th Risk-Based Concentration[3]	COPC Selection[3]
Benzo(a)anthracene	Soil	m	0.001	14	1.4	No
Benzo(a)pyrene	Soil	m	0.002	1.5	0.15	No
Benzo(b)fluoranthene	Soil	m	0.006	15	1.5	No
Benzo(g,h,i)perylene	Soil	nc	0.003	2300	230	No
Benzo(k)fluoranthene	Soil	m	0.003	150	15	No
Chrysene	Soil	m	0.006	1500	150	No
Dibenz(a,h)anthrancene	Soil	-	0.003	-	-	No
Fluoranthene	Soil	nc	0.001	3100	310	No
Fluorene	Soil	nc	0.0009	3100	310	No
Indeno(1,2,3-cd)pyrene	Soil	m	0.002	15	1.5	No
Phenanthrene	Soil	nc	0.011	2300	230	No
Pyrene	Soil	nc	0.002	2300	230	No
Aroclor-1016	Soil	ca	0.0038	1.0	0.1	No
Aroclor-1221	Soil	ca	0.0053	1.0	0.1	No
Aroclor-1232	Soil	ca	0.0053	1.0	0.1	No
Aroclor-1242	Soil	ca	0.0038	1.0	0.1	No
Aroclor-1248	Soil	ca	0.0038	1.0	0.1	No
Aroclor-1254	Soil	ca	0.0038	1.0	0.1	No
Aroclor-1260	Soil	ca	0.11	1.0	0.1	Yes
					Total Number of Selected COPCs	**3**

Notes:

1. Health Effect Classifications are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Table B1 (18 AAC 75.345 Soil Cleanup Levels).
   carcinogen (c); noncarcinogen (nc); mutagen (m)
2. Risk-Based Concentrations are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Table B1 (18 AAC 75.345 Soil Cleanup Levels).
3. Soil concentrations exceeding one-tenth of the Risk-Based Concentrations are selected as COPCs to be included in the cumulative risk calculations.
4. There are no risk-based concentrations for total chromium, chromium (III) insoluble salts is used as a surrogate.

ADEC = Alaska Department of Environmental Conservation

COPC = Chemical of Potential Concern

mg/kg = milligram per kilogram

Chemicals of Potential Concern[1]	Exposure Media	Exposure Route	Maximum Current Site Concentration (mg/kg)	Risk-Based Concentration[2]	Hazard Quotients[3]
Non-Carcinogenic					
Lead	Soil	Oral	88	-	-
		Dermal		-	-
		Inhalation		-	-
1,2-Dibromoethane	Soil	Oral	0.054[4]	-	-
		Dermal		-	-
		Inhalation		-	-
Aroclor-1260	Soil	Oral	0.11	-	-
		Dermal		-	-
		Inhalation		-	-
				Hazard Index:	**0E+00**

Notes:

1. Chemical of Potential Concern (COPC) selection is found on Table 1.
2. Risk-Based Concentrations for non-carginogenic exposure routes are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Appendix B Soil RBCs are for the under 40 inch climate zone.
3. Hazard Quotient (HQ) is the maximum site concentration divided by the applicable RBC. The hazard index (HI) is the sum of all HQs multipled by the risk management level of 1.
4. This concentration is the laboratory method detection limit used in place of a non-detect value. Elevated detection limits should not be used when determining cumulative risk.

ADEC = Alaska Department of Environmental Conservation
RBC = Risk-Based Concentration
HI = Hazard Index
HQ = Hazard Quotient
mg/kg = milligram per kilogram

Chemicals of Potential Concern[1]	Exposure Media	Exposure Route	Maximum Current Site Concentration (mg/kg)	Risk-Based Concentration[2]	Site Concentration/ RBC[3]
Carcinogenic					
Lead	Soil	Oral	88	-	-
		Dermal		-	-
		Inhalation		-	-
1,2-Dibromoethane	Soil	Oral	0.054[4]	-	-
		Dermal		-	-
		Inhalation		-	-
Aroclor-1260	Soil	Oral	0.11	4.51	0.024
		Dermal		11.4	0.0096
		Inhalation		19	0.0058
				Cumulative Carcinogenic Risk:	**4E-07**

Notes:

1. Chemical of Potential Concern (COPC) selection is found on Table 1.
2. Risk-Based Concentrations for carginogenic exposure routes are from ADEC Contaminated Sites Program Procedures for Calculating Cumulative Risk (2018) Appendix B Soil RBCs are for the under 40 inch climate zone.
3. Site Concentration/RBC is the maximum site concentration divided by the applicable RBC. The cumulative carcinogenic risk is the sum of all COPCs and exposure routes multipled by the risk management level of $1x10^{-5}$.
4. This concentration is the laboratory method detection limit used in place of a non-detect value. Elevated detection limits should not be used when determining cumulative risk.

ADEC = Alaska Department of Environmental Conservation

RBC = Risk-Based Concentration

mg/kg = milligram per kilogram

ARCADIS Design & Consultancy for natural and built assets