Arcadis U.S., Inc.
111 SW Columbia Street
Suite 670
Portland
Oregon 97201
Tel 503.220.8201
**www.arcadis-us.com**

ENVIRONMENT

Ms. Rebekah Reams
Alaska Department of Environmental Conservation (ADEC)
Spill Prevention and Response, Contaminated Sites Program
610 University Avenue
Fairbanks, Alaska 99709

Subject:
2020 First Semi-Annual Groundwater Monitoring Report

Date:
May 26, 2020

Contact:
Nicole Monroe

Phone:
503.785.9414

Email:
nicole.monroe@arcadis.com

Our ref:
30045449

Dear Ms. Reams,

On behalf of Chevron Environmental Management Company (Chevron), Arcadis US, Inc. (Arcadis) has prepared the attached *2020 First Semi-Annual Groundwater Monitoring Report* for the first semi-annual groundwater sampling event of 2020 for the following facility:

**Chevron Service**

| Station No. | ADEC File No. | Hazard ID: | Location |
|---|---|---|---|
| 91252 | 2107.26.003 | 23705 | 11836 Old Glenn Highway, Eagle River, Alaska |

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

Sincerely,

Arcadis U.S., Inc.

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

Copies:
Tim Bishop *(electronic copy)*
Mark Engelke *(electronic copy)*

ARCADIS Design & Consultancy for natural and built assets

Chevron Environmental Management Company

# 2020 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Chevron Service Station No. 91252
11836 Old Glenn Highway
Eagle River, Alaska
ADEC File No. 2107.26.003

May 26, 2020

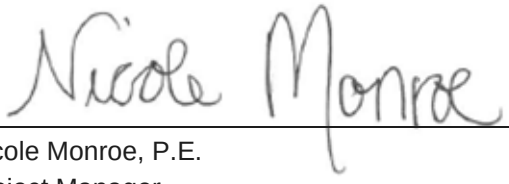
# 2020 FIRST SEMI-ANNUAL GROUNDWATER MONITORING REPORT

## Chevron Service Station No.91252

11836 Old Glenn Highway
Eagle River, Alaska

ADEC File No: 2107.26.003
HAZARD ID No: 23705

Max Elias
Environmental Scientist



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

Prepared for:

Chevron Environmental Management Company

Prepared by:

Arcadis U.S., Inc.
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Our Ref.:
30045449

Date:
May 26, 2020

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**SEMI-ANNUAL GROUNDWATER MONITORING REPORT**
**FIRST HALF 2020**
**May 26, 2020**

| | | | |
|---|---|---|---|
| Facility No: | Chevron Service Station 91252 | Address: | 11836 Old Glenn Highway, Eagle River, AK |

| | |
|---|---|
| Arcadis Contact Person / Phone No.: | Nicole Monroe / (503) 785-9414 |
| Arcadis Project No.: | 30045449 |
| Primary Agency/Regulatory ID No.: | Alaska Department of Environmental Conservation (ADEC) / Rebekah Reams / ADEC file ID: 2107.26.003 |

**WORK CONDUCTED THIS PERIOD [First Half 2020]:**

1. Conducted semi-annual groundwater monitoring activities on April 1, 2020.
2. Prepared the 2020 *First Semi-Annual Groundwater Monitoring Report*.

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

1. Conduct the second semi-annual groundwater monitoring activities.
2. Prepare the 2020 *Second Semi-Annual Groundwater Monitoring Report.*

| | | |
|---|---|---|
| Current Phase of Project: | Monitoring | |
| Frequency of Monitoring / Sampling: | Semi-Annual | |
| Is LNAPL Present On-site: | No | |
| Cumulative LNAPL Recovered to Date: | 0.00 | (gallons) |
| Approximate Depth to Groundwater: | 30.50 to 33.88 | (feet below top of casing) |
| Approximate Groundwater Elevation: | 272.68 to 277.08 | (feet relative to NAVD88) |
| Groundwater Flow Direction | North-northwest | |
| Groundwater Gradient | 0.035 | (feet per foot) |

| | |
|---|---|
| Current Remediation Techniques: | None |
| Permits for Discharge: | None |
| Summary of Unusual Activity: | MW-2 and MW-5 were obstructed by ice and could not be sampled |
| Agency Directive Requirements: | None |

# 1 INTRODUCTION

On behalf of Chevron Environmental Management Company (CEMC), Arcadis US, Inc. (Arcadis), has prepared this report to document the first semi-annual groundwater sampling events of 2020 for Chevron Service Station 91252, located at 11836 Old Glenn Highway in Eagle River, Alaska (the site). The site location map and site plan are shown as Figure 1 and Figure 2, respectively.

This work was conducted under the direction of a Qualified Environmental Professional" (QEP) and "Qualified Sampler" (18 Alaska Administrative Code [AAC] 75.333). Site background and history summaries are attached as Appendix A and field notes, data sheets, and general procedures are included as Appendix B.

# 2 GROUNDWATER MONITORING

## 2.1 Groundwater Gauging Methods

The 2020 first semi-annual groundwater gauging event was conducted on April 1, 2020. Site monitoring wells were gauged with an oil/water interface probe to determine depth-to-water and to ascertain if LNAPL was present.

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

## 2.2 Groundwater Elevation and Flow Direction

During the 2020 first semi-annual event, monitoring wells MW-1R, and MW-2 through MW-6 were scheduled to be gauged for groundwater elevations and the presence of LNAPL. The groundwater monitoring event field notes are presented in Appendix B.

The inferred groundwater flow direction for the first semi-annual 2020 monitoring events is to the north-northwest and is consistent with historical flow direction. Current and historical groundwater depth-to-water and elevation data are included in Table 1 and Table 3 respectively. A groundwater contour map with a rose diagram of historical flow directions is presented as Figure 3.

## 2.3 Groundwater Sampling Methods

The first semi-annual groundwater monitoring event was conducted on April 1, 2020 Groundwater samples were taken from monitoring well MW-3 using a low flow purge sampling method. Wells MW-2 and MW-5 were obstructed by ice and were unable to be sampled. The blind duplicate from well MW-3 was attempted but not collected due to slow well recharge.

Sampling procedures were conducted in accordance with ADEC *Field Sampling Guidance* (ADEC, 2019). Monitoring well caps were removed to allow groundwater levels to stabilize and equilibrate before using an electronic interface probe (EIP) meter capable of 0.01-foot accuracy to measure the depth to groundwater and total well depth. A bladder pump with compressor & control unit with clean/disposable Teflon lined tubing and bladders was used to purge groundwater from the wells and collect samples to minimize the risk of volatile contaminant absorption by the sampling equipment. Water table drawdown was continuously monitored during purging with a water level meter and the flow rate of the pump was adjusted to limit drawdown to 0.1 meter. The intake of the pump was set as close as possible to the soil groundwater interface. Water quality parameters were monitored during purging with a multi-parameter water quality meter equipped with a flow through cell and Turbidity meter. Parameters were recorded every 3 to 5 minutes until a minimum of three (minimum of four if using temperature as an indicator) of the parameters listed below stabilized. The flow rate was reduced to 100-150 ml/minute and samples were collected from the discharge line into laboratory sample bottles. Water quality parameters were considered stable when three successive readings were within the following ADEC limits:

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

Sample bottles were labeled, stored in a cooler packed with ice, and submitted to Pace Analytical (National Centre for Testing & Innovation), Mount Juliet, Tennessee under proper chain-of-custody procedures.

Groundwater samples collected from monitoring well MW-3 were submitted to the analytical laboratory for the following analysis:

- Full-Scan VOCs including benzene, toluene, ethylbenzene, total xylenes (collectively BTEX), methyl tert-butyl ether (MTBE), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), and naphthalene by United States Environmental Protection Agency (USEPA) method 8260D
- Total Petroleum Hydrocarbons- Diesel range organics (TPH-d) by Alaska method AK102

## 2.4 Groundwater Analytical Results

Routine analytical results for BTEX, MTBE, EDB, EDC, naphthalene, and TPH-d obtained from the first semi-annual 2020 groundwater monitoring event are summarized in Table 1 and are shown on Figure 4. Additional constituents analyzed be USEPA method 8260D are summarized in Table 2. Historical groundwater analytical results are summarized in Table 3 and historical PAH analytical results are summarized in Table 4.

# 3 LABORATORY DATA QUALITY ASSURANCE SUMMARY

As required by ADEC (Technical Memorandum, dated October 2019), Arcadis completed a laboratory data review checklist for the laboratory report generated for the 2020 semi-annual event. The laboratory report is included as Appendix C and data review checklist is included as Appendix D. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

## 3.1 Precision

The relative percent difference (RPD) for matrix spike/matrix spike duplicate (MS/MSD) and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were within the control limits.

A field duplicate sample was not collected for this event.

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

## 3.2 Accuracy

The percent recoveries for surrogates and MS/MSD were within the control limits.

LCS/LCSD recoveries for compound 1,4-dichlorobenzene was lower than the control limit and associated result was qualified as estimated.

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

## 3.3 Representativeness

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

## 3.4 Comparability

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

## 3.5 Completeness

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

## 3.6 Sensitivity

The compound bromodichloromethane concentration (0.00301 milligrams per liter [mg/L]) was greater than the ADEC Groundwater Cleanup level (0.0013 mg/L) in an equipment blank sample whereas the compound was non-detect in sample MW-3.

The compound TPH-d was detected at a concentration of 0.929 mg/L in the equipment blank.

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

# 4 CONCLUSIONS AND RECOMMENDATIONS

The groundwater data collected during the first semi-annual 2020 events indicate groundwater flow directions (north-northwest) are generally consistent with historical data. Groundwater samples were collected for analysis from monitoring well MW-3. Analytical results from the monitoring wells are generally consistent with historical data.

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

# 5 REFERENCES

ADEC. *Field Sampling Guidance*. Division of Spill Prevention and Response Contaminated Sites Program. August 2019.

ADEC Technical Memorandum, October 2019. *Minimum Quality Assurance Requirements for Sample Handling, Reports, and Laboratory Data*. ADEC, Division of Spill Prevention and Response Contaminated Sites Program.

# TABLES

**Table 1. Current Groundwater Gauging and Analytical Results**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Well ID | Sample Date | TOC (ft) | Datum | DTW (ft bTOC) | LNAPL Thickness (ft) | GW Elev (ft) | TPH-d (mg/L) | TPH-g (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Total Xylenes (mg/L) | MTBE (mg/L) | EDB mg/L | EDC mg/L | Naphthalene (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | | | | | | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | **0.000075** | **0.0017** | **0.0017** | |
| **MW-1R** | 4/1/2020 | 307.58 | NAVD88 | 30.50 | 0.00 | 277.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 4/1/2020 | 306.78 | NAVD88 | 32.11 | 0.00 | 274.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Well obstructed by ice, sample not collected |
| **MW-3** | 4/1/2020 | 306.56 | NAVD88 | 33.88 | 0.00 | 272.68 | <0.800 | -- | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | Well sampled, blind duplicate not collected due to slow well recharge |
| **MW-4** | 4/1/2020 | 307.41 | NAVD88 | 31.14 | 0.00 | 276.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 4/1/2020 | 307.78 | NAVD88 | 31.68 | 0.00 | 276.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Well obstructed by ice, sample not collected |
| **MW-6** | 4/1/2020 | 306.64 | NAVD88 | 31.41 | 0.00 | 275.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **Trip Blank** | 4/1/2020 | -- | -- | -- | -- | -- | -- | -- | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | |
| **QA (EB)** | 4/1/2020 | -- | -- | -- | -- | -- | **0.929** | -- | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | |

**Notes:**

ID = Identification
MW = Groundwater monitoring well
TOC = Top of casing
DTW = Depth to groundwater
ft bTOC = Feet below top of casing
ft = Feet relative to NAVD88
GW Elev = Groundwater elevation
mg/L = Milligrams per liter
<0.00100 = Not detected at or above the reported detection limit (RDL)
**Bold** = Value detected above Method detection limit (MDL)
**Bold and shaded =** Value exceeds ADEC Groundwater Cleanup Level
**Bold** and *Italicized* : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
-- = Not sampled/not measured/not available

TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to State of Alaska Method AK102.
Samples analytes by USEPA Method 8260D:
Benzene, Toluene, Ethylbenzene and Total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
Naphthalene
LUFT = Leaking Underground Fuel Tank
GC/MS = Gas chromatography/Mass Spectrometry
ADEC = Alaska Department of Environmental Conservation
NAVD88 = North American Vertical Datum of 1988
LNAPL = Light non-aqueous phase liquid
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)
QA (EB) = Quality Assurance (Equipment Blank)

**Table 2. Additional Current Groundwater Analytical Results**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Parameter Name | ADEC Groundwater Cleanup Levels (mg/L) | Location ID | MW-3 | TRIP BLANK | EQB |
|---|---|---|---|---|---|
| | | Lab Sample ID | L1205746-02 | L1205746-03 | L1205746-01 |
| | | Field Sample ID | MW-3-W-200401 | TRIP BLANK-W-200401 | EQB-1-W-200401 |
| | | Sample Purpose | REG | TB | EB |
| | | Date Sampled | 4/1/2020 | 4/1/2020 | 4/1/2020 |
| 1,1,1-Trichloroethane | **8** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,1,2,2-Tetrachloroethane | **0.00076** | mg/L | ***<0.00100*** | ***<0.00100*** | ***<0.00100*** |
| 1,1,2-Trichloroethane | **0.00041** | mg/L | ***<0.00100*** | ***<0.00100*** | ***<0.00100*** |
| 1,1,2-Trichlorotrifluoroethane (Freon 113) | **10** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,1-Dichloroethane | **0.028** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,1-Dichloroethene (Dichloroethylene) | **0.28** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,2,3-Trichlorobenzene | **0.007** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,2,4-Trichlorobenzene | **0.004** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,2,4-Trimethylbenzene | **0.056** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,2-Dichlorobenzene (o-Dichlorobenzene) | **0.3** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,2-Dichloropropane | **0.0082** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,3-Dichlorobenzene | **0.0047** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| 1,4-Dichlorobenzene | **0.0048** | mg/L | <0.00100 J | <0.00100 | <0.00100 |
| 2-Butanone (Methyl ethyl ketone) | **--** | mg/L | <0.0100 | <0.0100 | <0.0100 |
| 4-Methyl-2-pentanone | **6.3** | mg/L | <0.0100 | <0.0100 | <0.0100 |
| Acetone | **14** | mg/L | <0.0500 | <0.0500 | <0.0500 |
| Bromochloromethane | **--** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Bromodichloromethane | **0.0013** | mg/L | <0.00100 | <0.00100 | **0.00301** |
| Bromoform | **0.033** | mg/L | <0.00100 | <0.00100 | **0.000670 J** |
| Bromomethane (Methyl bromide) | **0.0075** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Carbon Disulfide | **0.81** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Carbon Tetrachloride | **0.0046** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Chlorobenzene | **0.078** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Chloroethane | **--** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Chloroform | **0.0022** | mg/L | <0.00500 | <0.00500 | **0.00148 J** |
| Chloromethane (Methyl chloride) | **0.19** | mg/L | <0.00250 | <0.00250 | <0.00250 |
| cis-1,2-Dichloroethene | **0.036** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| cis-1,3-Dichloropropene | **0.0047** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Dibromochloromethane | **0.0087** | mg/L | <0.00100 | <0.00100 | **0.003** |
| Dichlorodifluoromethane (Freon 12) | **0.2** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Isopropylbenzene | **--** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Methylene chloride (Dichloromethane) | **0.1** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Methyl-t-butyl ether | **0.14** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Styrene | **1.2** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Tetrachloroethene | **0.041** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| trans-1,2-Dichloroethene | **0.36** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| trans-1,3-Dichloropropene | **0.0047** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Trichloroethene (Trichloroethylene) | **0.0028** | mg/L | <0.00100 | <0.00100 | <0.00100 |
| Trichlorofluoromethane (Freon 11) | **5.2** | mg/L | <0.00500 | <0.00500 | <0.00500 |
| Vinyl chloride (Chloroethene) | **0.00019** | mg/L | ***<0.00100*** | ***<0.00100*** | ***<0.00100*** |

**Notes:**
ID = Identification
MW = Groundwater monitoring well
mg/L = Milligrams per liter
**Bold** = Value exceeds Method Detection Limit
**Bold and Shaded** = Value exceeds ADEC Groundwater Cleanup Level
Bold and Italicized : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
<0.00500 = Not detected at or above the Reported Detection Limit
-- = Not analyzed/ Not measured/ Not Available
Constituents analyzed by United States Environemntal Proteection Agency Method 8260D
J = Results are greater than the method detection limit and less than the reporting limit and considered estimated value

**Table 3. Historical Groundwater Gauging and Analytical Results**
**Third Quarter 2003 to Current**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Well ID | Sample Date | Screen Interval (ft bTOC) | TOC (ft amsl) | DTW (ft bTOC) | LNAPL thickness (ft) | GW Elev (ft amsl) | TPH-d (mg/L) | TPH-g (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Total Xylenes (mg/L) | MTBE (mg/L) | EDB (mg/L) | EDC (mg/L) | Naphthalene (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | | | | | | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | **0.000075** | **0.0017** | **0.0017** | |
| **MW-1** | 10/6/2003 | -- | 301.20 | 16.00 | 0.00 | 285.20 | **0.77** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | -- | -- | -- | |
| **MW-1** | 12/17/2003 | -- | 301.20 | 21.93 | 0.00 | 279.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 3/26/2004 | -- | 301.20 | 22.04 | 0.00 | 279.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 6/5/2004 | -- | 301.20 | 19.74 | 0.00 | 281.46 | **2.3** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-1** | 9/27/2004 | -- | 301.20 | 16.07 | 0.00 | 285.13 | **0.68** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-1** | 12/9/2004 | -- | 301.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 3/24/2005 | -- | 301.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 5/17/2005 | -- | 301.20 | 20.46 | 0.00 | 280.74 | **3.9** | **0.017** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-1** | 9/25/2005 | -- | 301.20 | 16.06 | 0.00 | 285.14 | **0.6** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | <0.0025 | -- | -- | -- | |
| **MW-1** | 5/17/2006 | -- | 301.20 | 21.73 | 0.00 | 279.47 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 9/26/2006 | -- | 301.20 | 20.24 | 0.00 | 280.96 | **0.52** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 5/18/2007 | -- | 301.20 | 20.50 | 0.00 | 280.70 | **2.6** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 9/20/2007 | -- | 301.20 | 21.96 | 0.00 | 279.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 3/28/2008 | -- | 301.20 | 22.21 | 0.00 | 278.99 | <0.391 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 6/9/2008 | -- | 301.20 | 21.00 | 0.00 | 280.20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1** | 9/15/2008 | -- | 301.20 | 19.49 | 0.00 | 281.71 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 10/28/2008 | -- | -- | 30.55 | 0.00 | -- | **0.22 [0.24]** | <0.01 [<0.01] | <0.001 [<0.001] | <0.001 [<0.001] | <0.001 [<0.001] | <0.002 [<0.002] | -- | -- | -- | -- | |
| **MW-1R** | 5/6/2009 | -- | -- | 30.63 | 0.00 | -- | **0.065** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 9/14/2009 | -- | -- | 30.68 | 0.00 | -- | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 4/21/2010 | -- | 301.73 | 30.30 | 0.00 | 271.43 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 7/22/2010 | -- | 301.73 | 38.23 | 0.00 | 271.23 | <0.051 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 8/3/2011 | -- | 301.73 | 30.67 | 0.00 | 271.06 | **0.058 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/30/2012 | -- | 301.73 | 29.95 | 0.00 | 271.78 | **0.10 J** | -- | -- | -- | -- | -- | -- | <0.0000096 | <0.0005 | -- | |
| **MW-1R** | 8/23/2012 | -- | 301.73 | 30.25 | 0.00 | 271.48 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/6/2013 | -- | 301.73 | 29.96 | 0.00 | 271.77 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/8/2013 | -- | -- | -- | -- | -- | <0.076 J | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/8/2013 | -- | -- | -- | -- | -- | **0.21 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | collected via hydrosleeve |
| **MW-1R** | 9/16/2013 | -- | 301.73 | 30.09 | 0.00 | 271.64 | <0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 4/29/2014 | -- | 301.73 | 30.27 | 0.00 | 271.46 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 04/30/2014 | -- | -- | -- | -- | -- | <0.065 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 10/1/2014 | -- | 301.73 | 30.20 | 0.00 | 271.53 | **0.081 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/6/2015 | -- | 301.73 | 30.50 | 0.00 | 271.23 | <0.051 J | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-1R** | 10/20/2015 | -- | 301.73 | 30.29 | 0.00 | 271.44 | <0.053 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-1R** | 5/19/2016 | -- | 301.73 | 31.50 | 0.00 | 270.23 | **0.26** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 9/28/2016 | -- | 301.73 | 30.36 | 0.00 | 271.37 | <0.051 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 5/22/2017 | -- | 301.73 | 30.33 | 0.00 | 271.40 | -- | -- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | |
| **MW-1R** | 10/16/2017 | -- | 301.73 | 30.34 | 0.00 | 271.39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 4/19/2018 | -- | 301.63 | 30.27 | 0.00 | 271.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | TOC adjusted for 2.4" cut |
| **MW-1R** | 9/4/2018 | -- | 299.23 | 30.34 | 0.00 | 268.89 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | TOC adjusted for 2.4" cut |
| **MW-1R** | 4/8/2019 | -- | 307.58 | 30.35 | 0.00 | 277.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | DTW taken from well survey 6/6/2019 |
| **MW-1R** | 9/9/2019 | -- | 307.58 | 30.51 | 0.00 | 277.07 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-1R** | 4/1/2020 | -- | 307.58 | 30.50 | 0.00 | 277.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 10/6/2003 | -- | 300.92 | 32.39 | 0.00 | 268.53 | **1.9** [0.88] | <0.01 [<0.01 | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.002 [<0.002] | -- | -- | -- | |
| **MW-2** | 12/17/2003 | -- | 300.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 3/26/2004 | -- | 300.92 | 32.45 | 0.00 | 268.47 | **0.14 [0.2]** | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | -- | -- | |
| **MW-2** | 6/5/2004 | -- | 300.92 | 31.97 | 0.00 | 268.95 | <0.24 [0.27] | <0.01 [<0.01] | <0.0005 [<0.0005 | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | -- | -- | -- | |
| **MW-2** | 9/27/2004 | -- | 300.92 | 32.43 | 0.00 | 268.49 | **0.43** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-2** | 12/9/2004 | -- | 300.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 3/24/2005 | -- | 300.92 | 36.67 | 0.00 | 264.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/17/2005 | -- | 300.92 | 32.27 | 0.00 | 268.65 | **0.64 [0.56]** | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-2** | 9/25/2005 | -- | 300.92 | 32.21 | 0.00 | 268.71 | **0.034** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | <0.0025 | -- | -- | -- | |
| **MW-2** | 5/17/2006 | -- | 300.92 | 32.09 | 0.00 | 268.83 | <0.12 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 9/26/2006 | -- | 300.92 | 32.14 | 0.00 | 268.78 | <0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 3/29/2007 | -- | 300.92 | 32.22 | 0.00 | 268.70 | **0.1** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/18/2007 | -- | 300.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 9/20/2007 | -- | 300.92 | 32.32 | 0.00 | 268.60 | **0.061** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 3/28/2008 | -- | 300.92 | 32.17 | 0.00 | 268.75 | <0.391 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 6/9/2008 | -- | 300.92 | 31.95 | 0.00 | 268.97 | **0.049** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 9/15/2008 | -- | 300.92 | 32.24 | 0.00 | 268.68 | <0.049 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 10/28/2008 | -- | 300.92 | 32.26 | 0.00 | 268.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 05/06/2009 | -- | 300.92 | 32.20 | 0.00 | 268.72 | **0.053** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 09/14/2009 | -- | 300.92 | 32.38 | 0.00 | 268.54 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 04/21/2010 | -- | 300.91 | 31.40 | 0.00 | 269.51 | **0.21 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 7/22/2010 | -- | 300.91 | 31.82 | 0.00 | 269.09 | **0.12 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 8/3/2011 | -- | 300.91 | 32.10 | 0.00 | 268.81 | **0.13 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/30/2012 | -- | 300.91 | 31.36 | 0.00 | 269.55 | **0.36** | -- | -- | -- | -- | -- | -- | **0.0000097 J** | <0.0005 | -- | |
| **MW-2** | 8/23/2012 | -- | 300.91 | 31.82 | 0.00 | 269.09 | <0.051 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/6/2013 | -- | 300.91 | 31.16 | 0.00 | 269.75 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/8/2013 | -- | -- | -- | -- | -- | **0.46 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/8/2013 | -- | -- | -- | -- | -- | **0.56 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | collected via hydrosleeve |
| **MW-2** | 9/16/2013 | -- | 300.91 | 31.50 | 0.00 | 269.41 | **0.52** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 4/29/2014 | -- | 300.91 | 31.00 | 0.00 | 269.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

**Table 3. Historical Groundwater Gauging and Analytical Results**
**Third Quarter 2003 to Current**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Well ID | Sample Date | Screen Interval (ft bTOC) | TOC (ft amsl) | DTW (ft bTOC) | LNAPL thickness (ft) | GW Elev (ft amsl) | TPH-d (mg/L) | TPH-g (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Total Xylenes (mg/L) | MTBE (mg/L) | EDB (mg/L) | EDC (mg/L) | Naphthalene (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | | | | | | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | **0.000075** | **0.0017** | **0.0017** | |
| **MW-2** | 4/30/2014 | -- | -- | -- | -- | -- | <0.068 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 10/1/2014 | -- | 300.91 | 31.78 | 0.00 | 269.13 | **0.071 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/6/2015 | -- | 300.91 | 31.97 | 0.00 | 268.94 | **0.054 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-2** | 10/20/2015 | -- | 300.91 | 31.81 | 0.00 | 269.10 | <0.050 | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-2** | 5/19/2016 | -- | 300.91 | 32.09 | 0.00 | 268.82 | <0.052 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 9/28/2016 | -- | 300.91 | 31.89 | 0.00 | 269.02 | **0.060 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 5/22/2017 | -- | 300.91 | 31.67 | 0.00 | 269.24 | **0.33** | -- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | |
| **MW-2** | 10/16/2017 | -- | 300.91 | 31.87 | 0.00 | 269.04 | **0.092 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 4/19/2018 | -- | 300.91 | 31.49 | 0.00 | 269.42 | **0.30 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 9/4/2018 | -- | 300.91 | 31.82 | 0.00 | 269.09 | **0.068 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 4/8/2019 | -- | 306.78 | 31.81 | 0.00 | 274.97 | <0.25 B[1] [<0.25 B[1]] | -- | -- | -- | -- | -- | -- | -- | -- | -- | DTW taken from well survey 6/6/2019 |
| **MW-2** | 9/9/2019 | -- | 306.78 | 32.05 | 0.00 | 32.05 | **0.12** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-2** | 4/1/2020 | -- | 306.78 | 32.11 | 0.00 | 274.67 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | Well obstructed by ice, sample not collected |
| **MW-3** | 10/6/2003 | -- | 300.69 | 33.80 | 0.00 | 266.89 | **2.9** | **0.016** | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | -- | -- | -- | |
| **MW-3** | 12/17/2003 | -- | 300.69 | 34.00 | 0.00 | 266.69 | **2.3** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | -- | -- | -- | |
| **MW-3** | 3/26/2004 | -- | 300.69 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 6/5/2004 | -- | 300.69 | 32.96 | 0.00 | 267.73 | **1.5** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-3** | 9/27/2004 | -- | 300.69 | 34.02 | 0.00 | 266.67 | **0.73** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-3** | 12/9/2004 | -- | 300.69 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 3/24/2005 | -- | 300.69 | 32.94 | 0.00 | 267.75 | **1.1 [0.77]** | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-3** | 5/17/2005 | -- | 300.69 | 32.27 | 0.00 | 268.42 | **0.41** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-3** | 9/25/2005 | -- | 300.69 | 33.62 | 0.00 | 267.07 | **1.2** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | <0.0025 | -- | -- | -- | |
| **MW-3** | 5/17/2006 | -- | 300.69 | 33.40 | 0.00 | 267.29 | **0.55** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/26/2006 | -- | 300.69 | 33.69 | 0.00 | 267.00 | **1** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 3/29/2007 | -- | 300.69 | 34.08 | 0.00 | 266.61 | **0.61** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/18/2007 | -- | 300.69 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/20/2007 | -- | 300.69 | 33.92 | 0.00 | 266.77 | **0.69** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 3/28/2008 | -- | 300.69 | 33.85 | 0.00 | 266.84 | <0.391 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 6/9/2008 | -- | 300.69 | 33.08 | 0.00 | 267.61 | **0.32** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/15/2008 | -- | 300.69 | 33.81 | 0.00 | 266.88 | **0.63** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 10/28/2008 | -- | 300.69 | 33.90 | 0.00 | 266.79 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/6/2009 | -- | 300.69 | 33.72 | 0.00 | 266.97 | **1.5** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/14/2009 | -- | 300.69 | 34.17 | 0.00 | 266.52 | **1.1** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 4/21/2010 | -- | 300.69 | 33.04 | 0.00 | 267.68 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 7/22/2010 | -- | 300.72 | 33.23 | 0.00 | 267.49 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 7/23/2010 | -- | 300.72 | -- | -- | -- | **0.76** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 8/3/2011 | -- | 300.72 | 33.71 | 0.00 | 267.01 | **1.7** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/30/2012 | -- | 300.72 | 31.61 | 0.00 | 269.11 | **0.23 J** | -- | -- | -- | -- | -- | -- | <0.0000097 | <0.0005 | -- | |
| **MW-3** | 8/23/2012 | -- | 300.72 | 33.28 | 0.00 | 267.44 | **0.35** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/6/2013 | -- | 300.72 | 32.09 | 0.00 | 268.63 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/8/2013 | -- | -- | -- | -- | -- | **0.29 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | collected via hydrosleeve |
| **MW-3** | 5/8/2013 | -- | -- | -- | -- | -- | **0.42 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/16/2013 | -- | 300.72 | 32.59 | 0.00 | 268.13 | **0.31 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 4/29/2014 | -- | 300.72 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 10/1/2014 | -- | 300.72 | 32.92 | 0.00 | 267.80 | **0.38 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/6/2015 | -- | 300.72 | 33.56 | 0.00 | 267.16 | **0.52 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-3** | 10/20/2015 | -- | 300.72 | 33.24 | 0.00 | 267.48 | **0.35** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-3** | 5/19/2016 | -- | 300.72 | 33.69 | 0.00 | 267.03 | **0.4** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/28/2016 | -- | 300.72 | 33.56 | 0.00 | 267.16 | **0.49** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 5/22/2017 | -- | 300.72 | 32.94 | 0.00 | 267.78 | **0.3** | -- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | |
| **MW-3** | 10/16/2017 | -- | 300.72 | 33.41 | 0.00 | 267.31 | **0.093 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 4/19/2018 | -- | 300.72 | 32.72 | 0.00 | 268.00 | **0.16 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 9/4/2018 | -- | 298.32 | 33.34 | 0.00 | 264.98 | **0.27** | -- | -- | -- | -- | -- | -- | -- | -- | -- | TOC adjusted for 2.4" cut |
| **MW-3** | 4/8/2019 | -- | 306.56 | 33.43 | 0.00 | 273.13 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | DTW taken from well survey 6/6/2019 |
| **MW-3** | 9/9/2019 | -- | 306.56 | 33.97 | 0.00 | 272.59 | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-3** | 4/1/2020 | -- | 306.56 | 33.88 | 0.00 | 272.68 | <0.800 | -- | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | Well sampled, blind duplicate not collected due to slow well recharge |
| **MW-4** | 10/6/2003 | -- | 301.09 | 32.25 | 0.00 | 268.84 | **0.23** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | -- | -- | -- | |
| **MW-4** | 12/17/2003 | -- | 301.09 | 31.75 | 0.00 | 269.34 | **0.16 [0.13]** | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.002 [<0.002] | -- | -- | -- | |
| **MW-4** | 3/26/2004 | -- | 301.09 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 6/5/2004 | -- | 301.09 | 31.37 | 0.00 | 269.72 | **3.2** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-4** | 9/27/2004 | -- | 301.09 | 31.03 | 0.00 | 270.06 | **1.8 [2.0]** | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | -- | -- | -- | |
| **MW-4** | 12/9/2004 | -- | 301.09 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 3/24/2005 | -- | 301.09 | -- | -- | -- | **--** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/17/2005 | -- | 301.09 | 30.89 | 0.00 | 270.20 | **0.56** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-4** | 9/25/2005 | -- | 301.09 | 31.51 | 0.00 | 269.58 | **0.25** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | <0.0025 | -- | -- | -- | |
| **MW-4** | 5/17/2006 | -- | 301.09 | 31.30 | 0.00 | 269.79 | **0.09** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/26/2006 | -- | 301.09 | 31.51 | 0.00 | 269.58 | **1.5** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 3/29/2007 | -- | 301.09 | 31.63 | 0.00 | 269.46 | **0.11** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/18/2007 | -- | 301.09 | 31.04 | 0.00 | 270.05 | **0.98** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/20/2007 | -- | 301.09 | 31.60 | 0.00 | 269.49 | **0.21** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 3/28/2008 | -- | 301.09 | 31.22 | 0.00 | 269.87 | <0.391 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 6/9/2008 | -- | 301.09 | 31.24 | 0.00 | 269.85 | **0.026** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/15/2008 | -- | 301.09 | 31.31 | 0.00 | 269.78 | **0.075** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |

**Table 3. Historical Groundwater Gauging and Analytical Results**
**Third Quarter 2003 to Current**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Well ID | Sample Date | Screen Interval (ft bTOC) | TOC (ft amsl) | DTW (ft bTOC) | LNAPL thickness (ft) | GW Elev (ft amsl) | TPH-d (mg/L) | TPH-g (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Total Xylenes (mg/L) | MTBE (mg/L) | EDB (mg/L) | EDC (mg/L) | Naphthalene (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | | | | | | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | **0.000075** | **0.0017** | **0.0017** | |
| **MW-4** | 10/28/2008 | -- | 301.09 | 32.07 | 0.00 | 269.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/6/2009 | -- | 301.09 | 31.41 | 0.00 | 269.68 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 4/21/2010 | -- | 301.11 | 31.23 | 0.00 | 269.88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 7/22/2010 | -- | 301.11 | 31.44 | 0.00 | 269.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 8/3/2011 | -- | 301.11 | 31.50 | 0.00 | 269.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/30/2012 | -- | 301.11 | 30.44 | 0.00 | 270.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 8/23/2012 | -- | 301.11 | 31.25 | 0.00 | 269.86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/6/2013 | -- | 301.11 | 30.59 | 0.00 | 270.52 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/16/2013 | -- | 301.11 | 31.09 | 0.00 | 270.02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 4/29/2014 | -- | 301.11 | 31.12 | 0.00 | 269.99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 10/1/2014 | -- | 301.11 | 30.96 | 0.00 | 270.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/6/2015 | -- | 301.11 | 31.41 | 0.00 | 269.70 | **0.11 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | -- | -- | -- | |
| **MW-4** | 10/20/2015 | -- | 301.11 | 30.25 | 0.00 | 270.86 | **0.10 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | -- | -- | -- | |
| **MW-4** | 5/19/2016 | -- | 301.11 | 31.49 | 0.00 | 269.62 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/28/2016 | -- | 301.11 | 31.14 | 0.00 | 269.97 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 5/22/2017 | -- | 301.11 | 31.12 | 0.00 | 269.99 | -- | -- | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | |
| **MW-4** | 10/16/2017 | -- | 301.11 | 31.41 | 0.00 | 269.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 4/19/2018 | -- | 301.11 | 31.01 | 0.00 | 270.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 9/4/2018 | -- | 301.11 | 31.19 | 0.00 | 269.92 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 4/8/2019 | -- | 307.41 | 31.56 | 0.00 | 275.85 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | DTW taken from well survey 6/6/2019 |
| **MW-4** | 9/9/2019 | -- | 307.41 | 31.8 | 0.00 | 275.61 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-4** | 4/1/2020 | -- | 307.41 | 31.14 | 0.00 | 276.27 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 9/25/2005 | -- | 301.54 | 31.61 | 0.00 | 269.93 | **1.9** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | <0.0025 | -- | -- | -- | |
| **MW-5** | 5/17/2006 | -- | 301.54 | 31.49 | 0.00 | 270.05 | <0.12 [0.22] | <0.01 [<0.01] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 9/26/2006 | -- | 301.54 | 31.53 | 0.00 | 270.01 | <0.24 [<0.24] | -- | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 3/29/2007 | -- | 301.54 | 31.76 | 0.00 | 269.78 | **0.091 [0.1]** | -- | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 5/18/2007 | -- | 301.54 | 31.34 | 0.00 | 270.20 | 0.39 [<0.24] | -- | <0.001 [<0.001] | <0.001 [<0.001] | <0.001 [<0.001] | <0.002 [<0.002] | -- | -- | -- | -- | |
| **MW-5** | 9/20/2007 | -- | 301.54 | 31.70 | 0.00 | 269.84 | **0.23 [0.23]** | -- | <0.001 [<0.001] | <0.001 [<0.001] | <0.001 [<0.001] | <0.002 [<0.002] | -- | -- | -- | -- | |
| **MW-5** | 3/28/2008 | -- | 301.54 | 31.48 | 0.00 | 270.06 | <0.391 [<0.391] | -- | <0.005 [<0.0005] | <0.0005 [<0.005] | <0.005 [<0.0005] | <0.0015 [<0.015] | -- | -- | -- | -- | |
| **MW-5** | 6/9/2008 | -- | 301.54 | 31.45 | 0.00 | 270.09 | **0.12 [0.11]** | <0.01 [<0.01] | <0.001 [<0.001] | <0.001 [<0.001] | <0.001 [<0.001] | <0.002 [<0.002] | -- | -- | -- | -- | |
| **MW-5** | 9/15/2008 | -- | 301.54 | 31.58 | 0.00 | 269.96 | **0.36 [0.30]** | 0.01 [<0.01] | <0.001 [<0.001] | <0.001 [<0.001] | <0.001 [<0.001] | <0.002 [<0.002] | -- | -- | -- | -- | |
| **MW-5** | 10/28/2008 | -- | 301.54 | 31.61 | 0.00 | 269.93 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 5/6/2009 | -- | 301.54 | 31.68 | 0.00 | 269.86 | **0.13 J [0.059 J]** | -- | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 9/14/2009 | -- | 301.54 | 31.76 | 0.00 | 269.78 | **0.19 J [0.61 J]** | 0.010 J [<0.010] | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 4/21/2010 | -- | 301.54 | 30.51 | 0.00 | 271.03 | <0.05 [0.27 J] | <0.010 [0.012 J] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 7/22/2010 | -- | 301.54 | 31.49 | 0.00 | 270.05 | **0.80 J [0.44 J]** | <0.010 [<0.010] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 8/3/2011 | -- | 301.54 | 31.70 | 0.00 | 269.84 | **1.2 [1.2 J]** | <0.010 [0.014 J] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | -- | -- | -- | |
| **MW-5** | 5/30/2012 | -- | 301.54 | 31.07 | 0.00 | 270.47 | 1.2 **[1.6]** | <0.010 [<0.010] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | -- | <0.0000096 [<0.0000095] | <0.0005 [<0.0005] | -- | |
| **MW-5** | 8/23/2012 | -- | 301.54 | 31.39 | 0.00 | 270.15 | **1.1 [1.1]** | <0.010 [<0.010] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | -- | -- | -- | |
| **MW-5** | 5/6/2013 | -- | 301.54 | 31.04 | 0.00 | 270.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | collected via hydrosleeve |
| **MW-5** | 5/8/2013 | -- | -- | -- | -- | -- | **1.4 [1.5]** | **0.0090 J [0.012 J]** | **0.00068 J [0.00070 J]** | <0.000077 [<0.000077] | **0.000096 J [0.00010 J]** | <0.00022 [<0.00022] | -- | -- | -- | -- | |
| **MW-5** | 5/8/2013 | -- | -- | -- | -- | -- | **1.6 [1.8]** | **0.013 J [0.0076 J]** | **0.00055 J [0.00067 J]** | <0.000077 [<0.000077] | <0.000081 [<0.000081] | <0.00022 [<0.00022] | -- | -- | -- | -- | |
| **MW-5** | 9/16/2013 | -- | 301.54 | 31.16 | 0.00 | 270.38 | **0.80 [0.85]** | <0.050 [<0.050] | **0.00038 J [0.00036 J]** | <0.00023 [<0.00023] | <0.00024 [<0.00024] | <0.00072 [<0.00072] | -- | -- | -- | -- | |
| **MW-5** | 4/29/2014 | -- | 301.54 | 31.39 | 0.00 | 270.15 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 4/30/2014 | -- | -- | -- | -- | -- | **0.79 [0.74]** | <0.050 [<0.050] | <0.00015 [<0.00015] | <0.00011 [<0.00011] | <0.00016 [<0.00016] | <0.00040 [<0.00040] | -- | -- | -- | -- | |
| **MW-5** | 10/1/2014 | -- | 301.54 | 31.38 | 0.00 | 270.16 | **1.0 [0.97]** | <0.050 J [<0.050 J] | **0.00056 J [0.00058 J]** | <0.00011 J [<0.00011] | <0.00016 J [<0.00016] | <0.00040 J [<0.00040] | -- | -- | -- | -- | |
| **MW-5** | 5/6/2015 | -- | 301.54 | 31.59 | 0.00 | 269.95 | **1.3 J [1.2 J]** | <0.010 [<0.010 ] | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | -- | -- | -- | -- | |
| **MW-5** | 10/20/2015 | -- | 301.54 | 30.94 | 0.00 | 271.14 | **2.0 [1.9]** | **0.012 J [0.017 J]** | <0.0005 [<0.0005 ] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015 ] | -- | -- | -- | -- | |
| **MW-5** | 5/19/2016 | -- | 301.54 | 31.61 | 0.00 | 269.93 | **1.5 [1.6]** | **0.014 J [0.011 J]** | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | <0.0005 [<0.0005 ] | -- | -- | -- | -- | |
| **MW-5** | 9/28/2016 | -- | 301.54 | 31.46 | 0.00 | 270.08 | **1.5 [1.8]** | <0.010 [<0.010] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | -- | -- | -- | |
| **MW-5** | 5/22/2017 | -- | 301.54 | 31.33 | 0.00 | 270.21 | **2.3 [2.3]** | -- | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0005 [<0.0005] | -- | |
| **MW-5** | 10/16/2017 | -- | 301.54 | 31.39 | 0.00 | 270.15 | **1.8 J [1.7 J]** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 4/19/2018 | -- | 301.54 | 31.25 | 0.00 | 270.29 | 1.2 J **[1.5 J]** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 9/4/2018 | -- | 300.34 | 31.44 | 0.00 | 268.90 | **1.6 J [3.4 J]** | -- | -- | -- | -- | -- | -- | -- | -- | -- | TOC adjusted for 1.15" cut |
| **MW-5** | 4/8/2019 | -- | 307.78 | 31.53 | 0.00 | 276.25 | **0.92** | -- | -- | -- | -- | -- | -- | -- | -- | -- | DTW taken from well survey 6/6/2019 |
| **MW-5** | 9/9/2019 | -- | 307.78 | 31.69 | 0.00 | 276.09 | **1.7** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-5** | 4/1/2020 | -- | 307.78 | 31.68 | 0.00 | 276.10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Well obstructed by ice, sample not collected |
| **MW-6** | 9/25/2005 | -- | 300.30 | 31.14 | 0.00 | 269.16 | <0.24 [0.42] | **0.01 [0.01]** | **0.0005 [0.0005]** | <0.0005 [<0.0005] | <0.0005 [<0.0005] | <0.0015 [<0.0015] | <0.0025 [<0.0025] | -- | -- | -- | |
| **MW-6** | 5/17/2006 | -- | 300.30 | 31.04 | 0.00 | 269.26 | **0.27** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 9/26/2006 | -- | 300.30 | 31.11 | 0.00 | 269.19 | <0.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 3/29/2007 | -- | 300.30 | 31.15 | 0.00 | 269.15 | **2.3** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 5/18/2007 | -- | 300.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 9/20/2007 | -- | 300.30 | 31.24 | 0.00 | 269.06 | **0.19** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 3/28/2008 | -- | 300.30 | 31.13 | 0.00 | 269.17 | <0.391 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 6/9/2008 | -- | 300.30 | 30.94 | 0.00 | 269.36 | <0.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 9/15/2008 | -- | 300.30 | 31.18 | 0.00 | 269.12 | **0.11** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 10/28/2008 | -- | 300.30 | 31.19 | 0.00 | 269.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 5/6/2009 | -- | 300.30 | 31.13 | 0.00 | 269.17 | **0.11** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 9/14/2009 | -- | 300.30 | 31.31 | 0.00 | 268.99 | **0.13 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 4/21/2010 | -- | 300.30 | 31.30 | 0.00 | 269.00 | **1.1** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 7/22/2010 | -- | 300.30 | 30.92 | 0.00 | 269.38 | **0.27** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 8/3/2011 | -- | 300.30 | 31.14 | 0.00 | 269.16 | **0.24 J** | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| **MW-6** | 5/30/2012 | -- | 300.30 | 30.55 | 0.00 | 269.75 | **0.21 J** | -- | -- | -- | -- | -- | -- | <0.0000096 | <0.0005 | -- | |

**Table 3. Historical Groundwater Gauging and Analytical Results**
**Third Quarter 2003 to Current**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

| Well ID | Sample Date | Screen Interval (ft bTOC) | TOC (ft amsl) | DTW (ft bTOC) | LNAPL thickness (ft) | GW Elev (ft amsl) | TPH-d (mg/L) | TPH-g (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Total Xylenes (mg/L) | MTBE (mg/L) | EDB (mg/L) | EDC (mg/L) | Naphthalene (mg/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | | | | | | **1.5** | **2.2** | **0.0046** | **1.1** | **0.015** | **0.19** | **0.14** | **0.000075** | **0.0017** | **0.0017** | |
| **MW-6** | 8/23/2012 | -- | 300.30 | 30.99 | 0.00 | 269.31 | **0.050 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | collected via hydrosleeve |
| **MW-6** | 5/6/2013 | -- | 300.30 | 30.42 | 0.00 | 269.88 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 5/8/2013 | -- | -- | -- | -- | -- | **0.40 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 5/8/2013 | -- | -- | -- | -- | -- | **0.51 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 9/16/2013 | -- | 300.30 | 30.68 | 0.00 | 269.62 | **0.5** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 4/29/2014 | -- | 300.30 | 30.81 | 0.00 | 269.49 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 4/30/2014 | -- | -- | -- | -- | -- | **0.10 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 10/1/2014 | -- | 300.30 | 30.99 | 0.00 | 269.31 | **0.20 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 5/6/2015 | -- | 300.30 | 31.08 | 0.00 | 269.22 | **0.11 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **MW-6** | 10/20/2015 | -- | 300.30 | 30.94 | 0.00 | 269.36 | **0.24 J** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **MW-6** | 5/19/2016 | -- | 300.30 | 31.20 | 0.00 | 269.10 | **0.053 J** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 9/28/2016 | -- | 300.30 | 30.94 | 0.00 | 269.36 | **0.29** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 5/22/2017 | -- | 300.30 | 30.86 | 0.00 | 269.44 | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | |
| **MW-6** | 10/16/2017 | -- | 300.30 | 31.01 | 0.00 | 269.29 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 4/19/2018 | -- | 300.30 | 30.56 | 0.00 | 269.74 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 9/4/2018 | -- | 300.30 | 31.03 | 0.00 | 269.27 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | - | - | **--** | |
| **MW-6** | 4/8/2019 | -- | 306.64 | 31.20 | 0.00 | 275.44 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | DTW taken from well survey 6/6/2019 |
| **MW-6** | 9/9/2019 | -- | 306.64 | 31.41 | 0.00 | 275.23 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **MW-6** | 4/1/2020 | -- | 306.64 | 31.41 | 0.00 | 275.23 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 10/6/2003 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | **--** | **--** | **--** | |
| **Trip Blank** | 12/17/2003 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.002 | **--** | **--** | **--** | |
| **Trip Blank** | 3/26/2004 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | |
| **Trip Blank** | 6/5/2004 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | **--** | **--** | **--** | |
| **Trip Blank** | 9/27/2004 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 3/24/2005 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/17/2005 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | -- | **--** | **--** | **--** | |
| **Trip Blank** | 9/25/2005 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0025 | **--** | **--** | **--** | |
| **Trip Blank** | 9/26/2006 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 3/29/2007 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 9/20/2007 | -- | -- | -- | -- | -- | **--** | **--** | <0.001 | <0.001 | <0.001 | <0.002 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 3/28/2008 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 6/5/2008 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | -- | **--** | **--** | **--** | |
| **Trip Blank** | 9/15/2008 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 10/28/2008 | -- | -- | -- | -- | -- | **--** | <0.01 | <0.001 | <0.001 | <0.001 | <0.002 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/6/2009 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 9/14/2009 | -- | -- | -- | -- | -- | **--** | <0.010 | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 4/21/2010 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 7/22/2010 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 8/3/2011 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/30/2012 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | <0.0005 | **--** | |
| **Trip Blank** | 8/23/2012 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/8/2013 | -- | -- | -- | -- | -- | **--** | <0.0070 | <0.000062 | <0.000077 | <0.000081 | <0.00022 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 9/16/2013 | -- | -- | -- | -- | -- | **--** | <0.050 | <0.00024 | <0.00023 | <0.00024 | <0.00072 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 4/30/2014 | -- | -- | -- | -- | -- | **--** | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 10/1/2014 | -- | -- | -- | -- | -- | **--** | <0.050 | <0.00015 | <0.00011 | <0.00016 | <0.00040 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/6/2015 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 10/20/2015 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/19/2016 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0015 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 9/28/2016 | -- | -- | -- | -- | -- | **--** | <0.010 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 5/22/2017 | -- | -- | -- | -- | -- | **--** | **--** | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | **--** | |
| **Trip Blank** | 9/9/2019 | -- | | -- | -- | -- | -- | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | |
| **Trip Blank** | 4/1/2020 | -- | -- | -- | -- | -- | -- | **--** | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | |
| **QA (EB)** | 4/1/2020 | -- | -- | -- | -- | -- | **0.929** | **--** | <0.00100 | <0.00100 | <0.00100 | <0.00300 | <0.00100 | <0.00000500 | <0.00100 | ***<0.00500*** | |

**Notes:**

ID = Identification
MW = Groundwater monitoring well
TOC = Top of casing
DTW = Depth to groundwater
ft bTOC = Feet below top of casing
ft = Feet relative to NAVD88
GW Elev = Groundwater elevation
mg/L = Milligrams per liter
<0.00100 = Not detected at or above the reported detection limit (RDL)
**Bold** = Value detected above Method detection limit (MDL)
**Bold and shaded =** Value exceeds ADEC Groundwater Cleanup Level
Bold and Italicized : Constituent considered non-detect, however Laboratory RDL is greater than the ADEC Groundwater Cleanup Level
-- = Not sampled/not measured/not available
QA (EB) = Quality Assurance (Equipment Blank)
NAVD88 = North American Vertical Datum of 1988

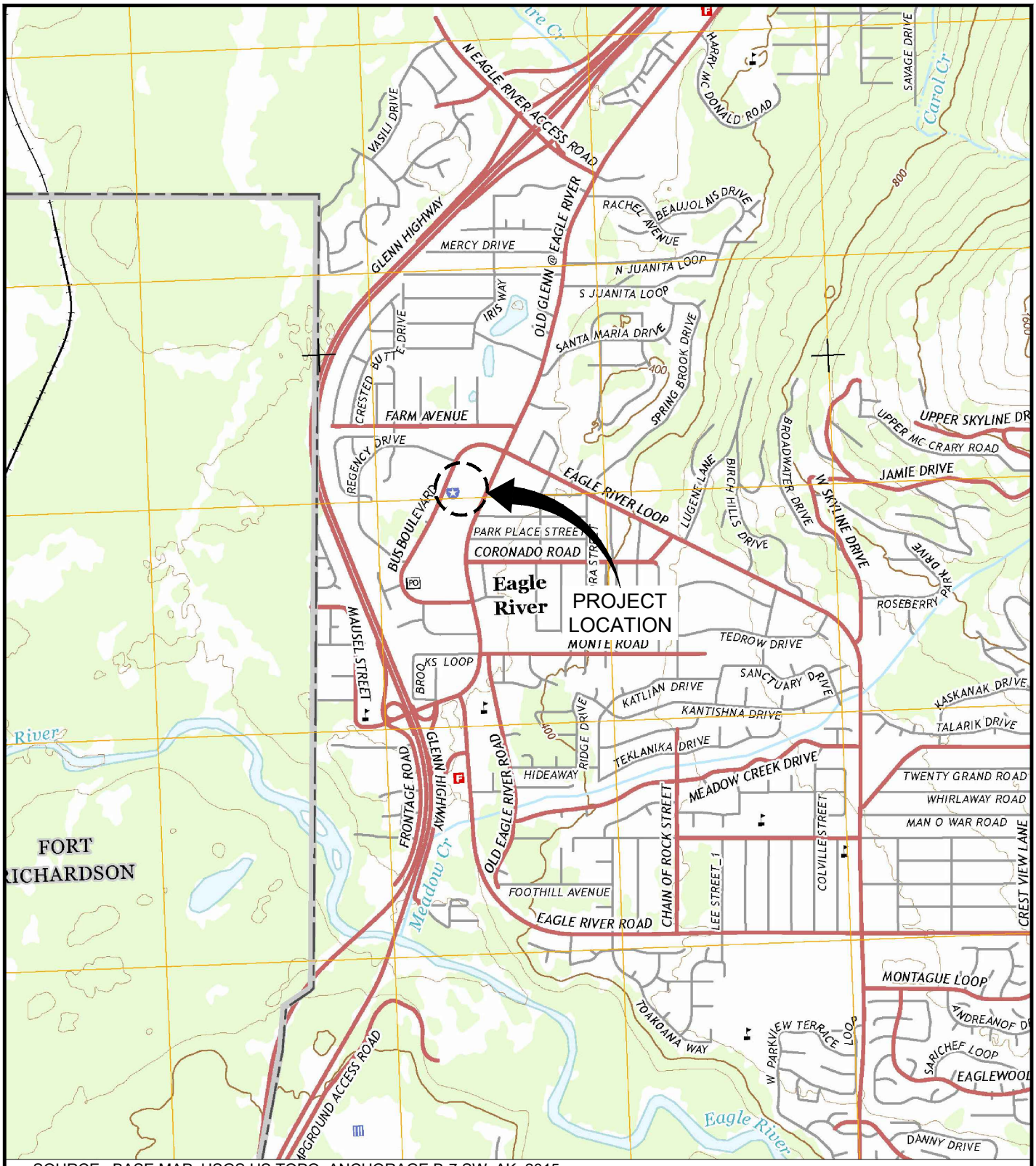
TPH-d = Total petroleum hydrocarbons, diesel range by LUFT GC/MS according to State of Alaska Method AK102.
Samples analytes by USEPA Method 8260D:
Benzene, Toluene, Ethylbenzene and Total xylenes (collectively BTEX)
MTBE = Methyl tert-butyl ether
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
Naphthalene
LUFT = Leaking Underground Fuel Tank
GC/MS = Gas chromatography/Mass Spectrometry
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)
LNAPL = Light non-aqueous phase liquid
ADEC = Alaska Department of Environmental Conservation
The laboratory for this site was changed from Eurofins Calscience to Pace Analytical prior to the first quarter 2020 groundwater monitoring event. Prior to this date, Eurofins Calscience was using the carbon ranges as follows: TPH-g as C6-C10 and TPH-d as C13-C22. Pace Analytical reports the following carbon ranges: TPH-g as C5-C12 and TPH-d as C12-C22.

**Table 4. Historical Groundwater Poly Aromatic Hydrocarbons (PAHs) Analytical Data**
Chevron-Branded Service Station 91252
11836 Old Glenn Highway
Eagle River, Alaska

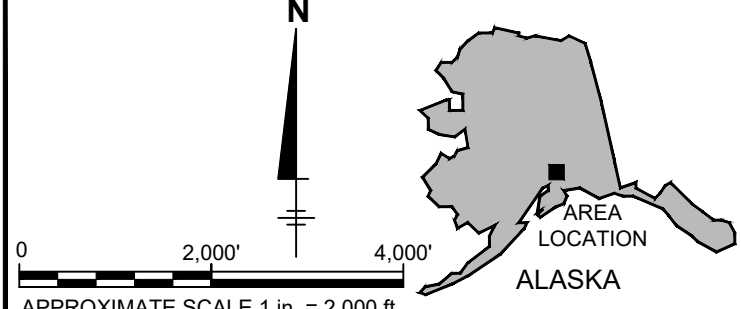
| Well ID | Sample Date | Acenaphthene (mg/L) | Acenaphthylene (mg/L) | Anthracene (mg/L) | Benzo(a)anthracene (mg/L) | Benzo(a)pyrene (mg/L) | Benzo(b)fluoranthene (mg/L) | Benzo(g,h,i)perylene (mg/L) | Benzo(k)Fluoranthene (mg/L) | Chrysene (mg/L) | Dibenz(a,h)anthracene (mg/L) | Ethene (mg/L) | Fluoranthene (mg/L) | Fluorene (mg/L) | Indeno(1,2,3-cd)pyrene (mg/L) | Naphthalene (mg/L) | Phenanthrene (mg/L) | Pyrene (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **ADEC Groundwater Cleanup Levels[a]** | | **0.534** | **0.261** | **0.0434** | **0.0003** | **0.00025** | **0.0025** | **0.602** | **0.0008** | **0.002** | **0.00025** | | **0.26** | **0.294** | **0.00019** | **0.00165** | **0.175** | **0.121** |
| **MW-1R** | 5/22/2017 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | **0.00012 J** | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.000097 | <0.00029 | <0.00029 | **0.00015 J** |
| **MW-2** | 5/22/2017 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.000029 | <0.000029 | <0.0000096 |
| **MW-3** | 5/22/2017 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.000095 | <0.00029 | <0.00029 | <0.000095 |
| **MW-4** | 5/22/2017 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.0000096 | <0.000029 | <0.000029 | <0.0000096 |
| **MW-5** | 5/22/2017 | **0.00024 [0.00026]** | **0.000083 [0.000091]** | **0.00013 [0.00014]** | **0.000011 J [0.000010 J** | **0.000010 J** [<0.0000098] | **0.000027 J [0.000027 J]** | **0.000025 J [0.000023 J]** | <0.0000097[<0.0000098] | **0.000040 J [0.000039 J** | <0.0000097 [<0.0000098] | **0.000041 J [0.000040 J** | **0.000041 J [0.000040 J** | **0.0018 [0.0020]** | 0.000010 J [<0.0000098] | **0.0014 [0.00082]** | **0.0012 [0.0013]** | **0.000068 [0.000065]** |
| **MW-6** | 5/22/2017 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | <0.0000097 | **0.00059** | <0.000029 | <0.0000097 |

**Notes:**
ID = Identification
MW = Groundwater monitoring well
PAHs = Poly aromatic hydrocarbons by Method SW8270
ADEC = Alaska Department of Environmental Conservation
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)
**Bold =** At or above the method detection limit (MDL)
**Bold and Shaded** Value exceeds ADEC Groundwater Cleanup Level
mg/L = milligrams per liter
J = The compound was positively identified; however, the associated numerical value is an estimated concentration only
- = Not measured / not analyzed
<0.000097= Constituent not detected above method detection limit (MDL)
[BD] = Duplicate Sample Results

# FIGURES




SOURCE : BASE MAP USGS US TOPO; ANCHORAGE B-7 SW, AK, 2015.




APPROXIMATE SCALE 1 in. = 2,000 ft.

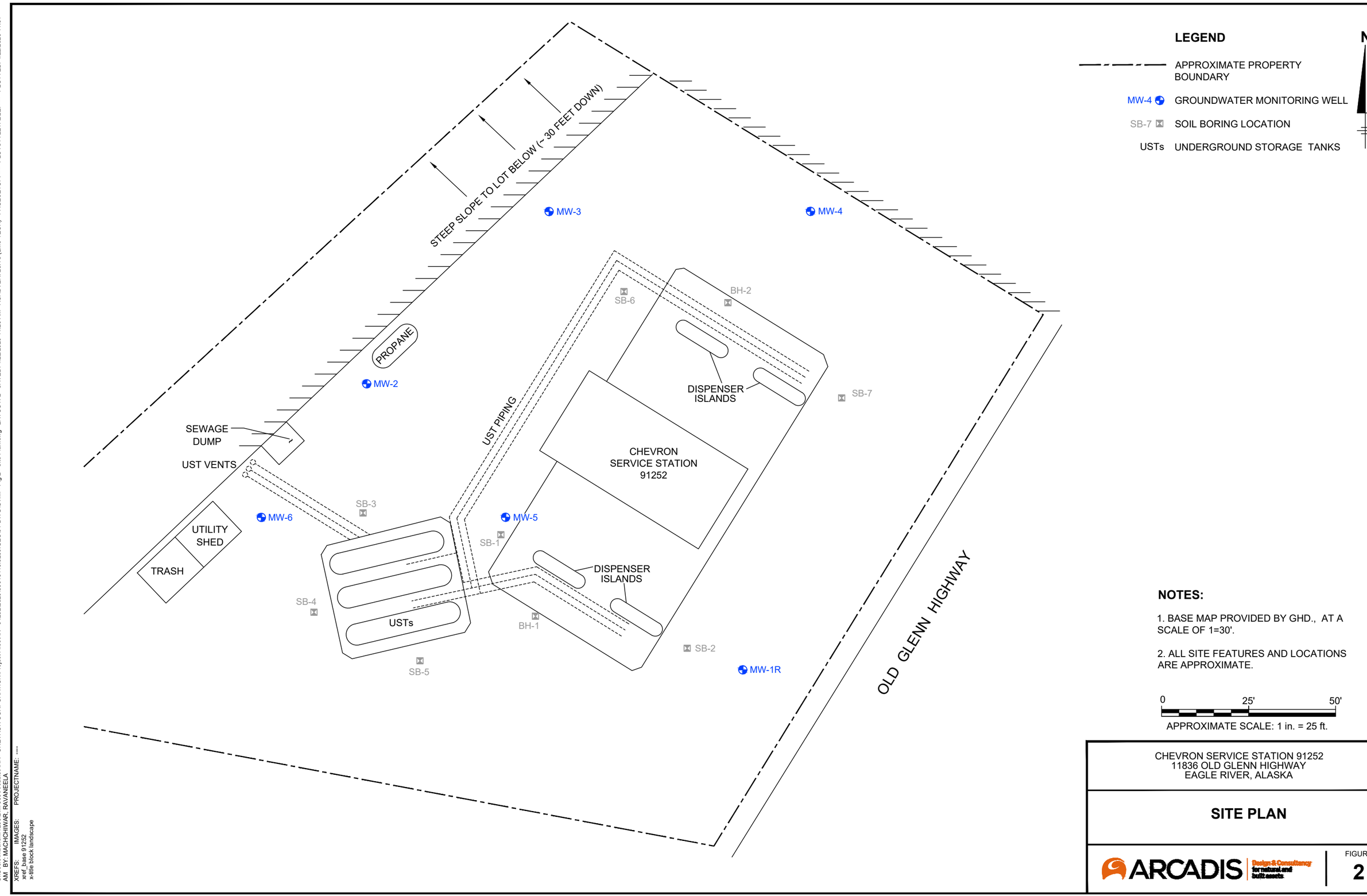
CHEVRON SERVICE STATION 91252
11836 OLD GLENN HIGHWAY
EAGLE RIVER, ALASKA

# SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\madarapv9594\BIM 360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\AK - 91252\2020\30045449.5230.GEC\01-DWG\GWM - Fig 1 - Site Location Map.dwg LAYOUT: 1 SAVED: 4/8/2020 5:27 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB
PLOTTED: 4/14/2020 3:49 PM BY: MADARAPU, VENKAT AKHIL




**NOTES:**

1. BASE MAP PROVIDED BY GHD., AT A SCALE OF 1=30'.

2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 25' 50'

APPROXIMATE SCALE: 1 in. = 25 ft.

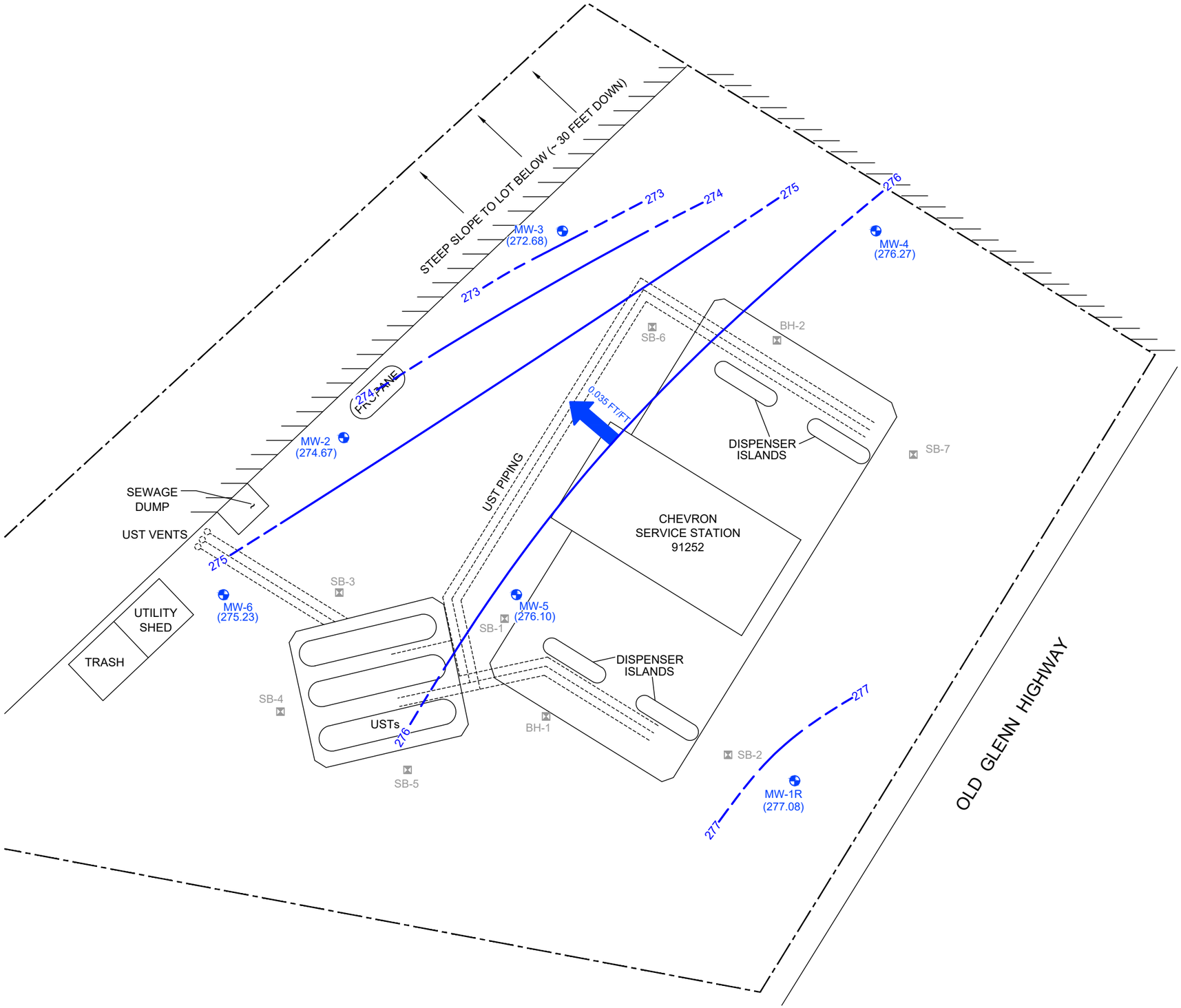
CHEVRON SERVICE STATION 91252
11836 OLD GLENN HIGHWAY
EAGLE RIVER, ALASKA

# SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
**2**

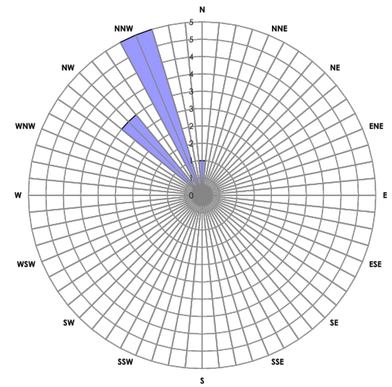
CITY:(Reqd) DIV/GROUP:(Reqd) DB:(Reqd) LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
C:\Users\machr1256\BIM 360\Arcadis\ANA - CHEVRON CORPORATION\Project Files\AK - 91252\2020\300454449.5230.GEC\01-DWG\GWM - Fig 2 - Site Plan.dwg LAYOUT: 2 SAVED: 4/22/2020 11:29 AM ACADVER: 23.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 4/22/2020 11:31
AM BY: MACHCHIWAR, RAVANEELA
XREFS: IMAGES: PROJECTNAME: ----
xref_base 91252
x-little block landscape




## LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- MW-4 — GROUNDWATER MONITORING WELL
- SB-7 — SOIL BORING LOCATION
- (277.08) — GROUNDWATER ELEVATION IN FEET RELATIVE TO NAVD88
- 277 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 0.035 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)
- NAVD88 — NORTH AMERICAN VERTICAL DATUM OF 1988

N




**NOTES:**

1. BASE MAP PROVIDED BY GHD., AT A SCALE OF 1=30'.

2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 25' 50'

APPROXIMATE SCALE: 1 in. = 25 ft.

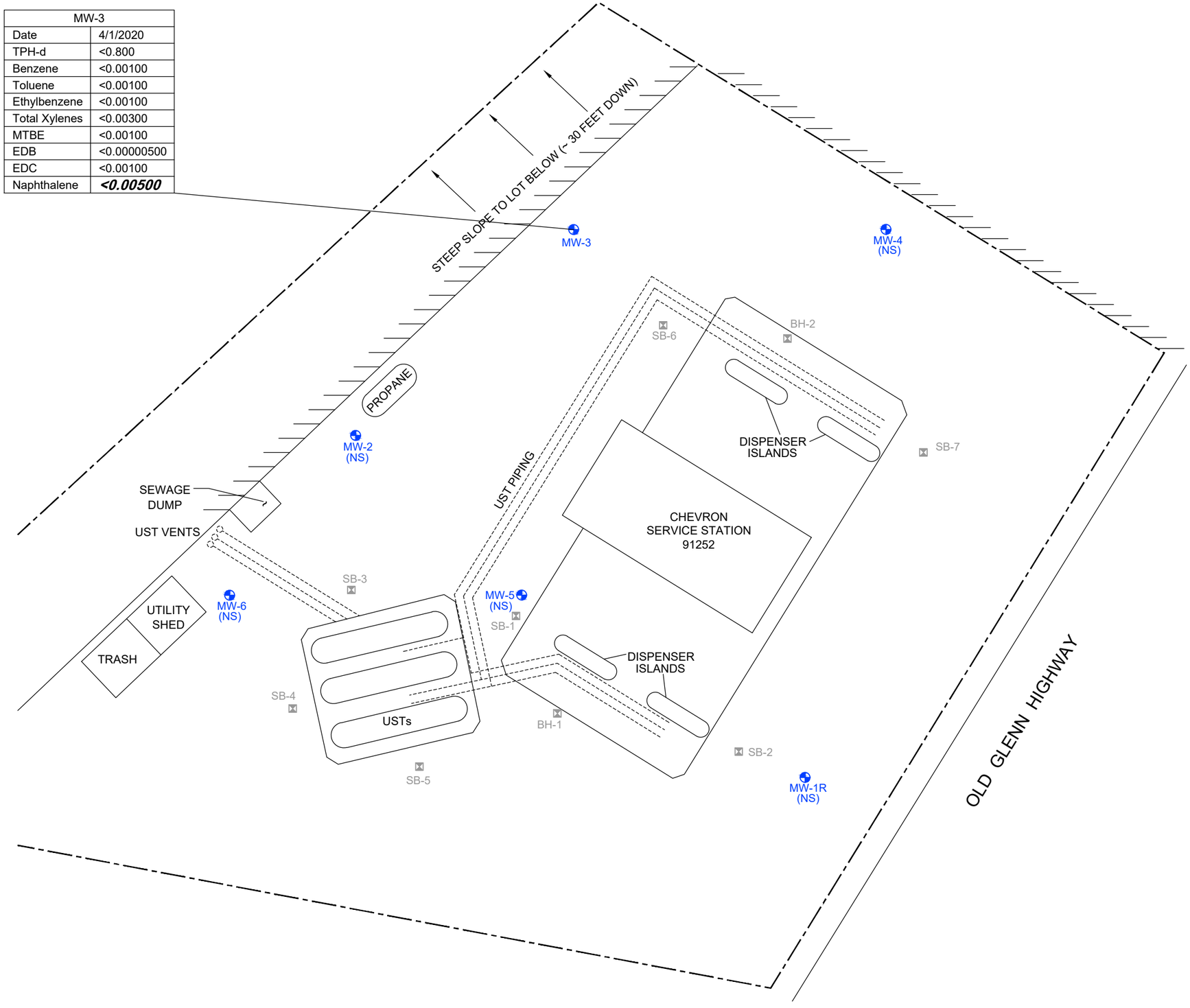
CHEVRON SERVICE STATION 91252
11836 OLD GLENN HIGHWAY
EAGLE RIVER, ALASKA

# GROUNDWATER ELEVATION CONTOUR MAP APRIL 1, 2020

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

| MW-3 | |
|---|---|
| Date | 4/1/2020 |
| TPH-d | <0.800 |
| Benzene | <0.00100 |
| Toluene | <0.00100 |
| Ethylbenzene | <0.00100 |
| Total Xylenes | <0.00300 |
| MTBE | <0.00100 |
| EDB | <0.00000500 |
| EDC | <0.00100 |
| Naphthalene | ***<0.00500*** |




## LEGEND

| | |
|---|---|
| | APPROXIMATE PROPERTY BOUNDARY |
| MW-4 | GROUNDWATER MONITORING WELL |
| SB-7 | SOIL BORING LOCATION |
| TPH-d | TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS |
| MTBE | METHYL TERT-BUTYL ETHER |
| EDB | 1,2-DIBROMOETHANE |
| EDC | 1,2-DICHLOROETHANE |
| ***BOLD*** | CONSTITUENT CONSIDERED NON-DETECT, HOWEVER LABORATORY REPORT DETECTION LIMIT (RDL) IS GREATER THAN THE ADEC GROUNDWATER CLEANUP LEVEL |
| ADEC | ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION |
| (NS) | NOT SAMPLED |

N

| Analyte | ADEC Groundwater Cleanup Levels |
|---|---|
| TPH-d | 1.5 |
| Benzene | 0.0046 |
| Toluene | 1.1 |
| Ethylbenzene | 0.015 |
| Total Xylenes | 0.19 |
| MTBE | 0.14 |
| EDB | 0.000075 |
| EDC | 0.0017 |
| Naphthalene | 0.0017 |

Concentration in mg/L

**NOTES:**

1. BASE MAP PROVIDED BY GHD., AT A SCALE OF 1=30'.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.

0 25' 50'

APPROXIMATE SCALE: 1 in. = 25 ft.

CHEVRON SERVICE STATION 91252
11836 OLD GLENN HIGHWAY
EAGLE RIVER, ALASKA

# GROUNDWATER ANALYTICAL RESULT MAP APRIL 1, 2020

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

# APPENDIX A

## Site Background and History

ARCADIS Design & Consultancy for natural and built assets

**Chevron Environmental Management Company**

# Appendix A:

# Site History and Background

**Chevron Facility 91252**
11836 Old Glenn Highway
Eagle River, Alaska
ADEC File No: 2107.26.003
Hazard ID No: 23705

May 26, 2020

**Appendix A: 91252 Site Description and Background**

# 1 91252 SITE BACKGROUND AND HISTORY

## 1.1 Site Description and Vicinity

The Chevron facility 91252 (site) is currently a service station located at 11836 Old Glenn Highway in Eagle River, Alaska. Site facilities consist of three underground storage tanks (USTs), fuel dispenser islands, piping, and a station building. The surrounding properties are primarily commercial, and the site is bordered by businesses to the north, south, east and west.

## 1.2 Site History

The site was upgraded in August and September 1995, at which time three gasoline USTs, product lines, and dispenser islands were replaced.

# 2 CURRENT SITE MONITORING ACTIVITIES

The site currently has a network of 6 groundwater monitoring wells (MW-1R, and MW-2 through MW-6) which are monitored semiannually. Recent historical sampling had no detectable levels of diesel-range organics (DRO) above ADEC TLs for MW-2 and MW-3. Monitoring well MW-5 has historically had detections exceeding cleanup levels of DRO (1.5 mg/L).

# 3 GEOLOGY AND HYDROGEOLOGY

## 3.1 Site Hydrogeology

The site is in south-central Alaska, east of Cook Inlet and Eagle River. The static groundwater depths at the site have historically ranged between 16.00 and 33.56 feet below top of casing (ft btoc) and has historically flowed to the north.

# REFERENCES

GHD Inc. 2018. First Semiannual 2018 Groundwater Monitoring Report, Chevron-Branded Service Station 91252, 11836 Old Glenn Highway, Eagle River, AK. June 12

# APPENDIX B

## Field Data Sheets

ARCADIS Design & Consultancy for natural and built assets

# Daily Log

**Project Name :** 91252
**Project Number :** 30043248
**Purpose :** GW sampling
**PPE :** Level D
**Equipment:** Water Quality Meter (i.e. YSI)

**Weather(°F) :** Clear
**Prepared By:** Evan Wujcik

| Date | Time | Description of Activities |
|---|---|---|
| 4/1/2020 | 10:30 | Arrive on site<br>Open permit to work<br>Locate wells |
| 4/1/2020 | 11:30 | Set up proper delineation<br>Put on appropriate PPE<br>Open all well vaults |
| 4/1/2020 | 12:00 | Gage all wells<br>Prepare equipment for sample<br>MW4 and MW 3 Well vaults frozen with ice, Wells were able to be gaged |
| 4/1/2020 | 12:30 | Attempted to put pump down MW2 and MW5<br>Both of these wells were obstructed by ice, The pump could not fit down the well<br>Pump was able to go down into MW3 |
| 4/1/2020 | 13:00 | Collect sample from MW3<br>Well is assumed to have earthquake damage, Due to water draw down and no recharge |
| 4/1/2020 | 14:00 | Finish collecting samples<br>Pack samples in cooler<br>Decon all equipment<br>Load vehicle |
| 4/1/2020 | 14:30 | Close permit to work<br>Depart site for office |

## Waste Management:

| Drums On Site | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Date | Number of Drums upon Arrival | Size of Drums | Type of Drums | Condition of Drums | Waste Drummed Today? | Number of drums Created | Size of drums | Condition of Drums | General Waste Comments |
| 4/1/2020 | | | | | no | | | | |

# CEMC Groundwater Sampling Form

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Project Number** | 30043248 | **Well ID** | MW-3 | | | **Date** | 4/1/2020 |
| **Site Location** | 11836 Old Glenn Highway, Eagle River Alaska | **Site ID** | 91252 | | | **Weather(°F)** | Clear |
| **Measuring Pt. Description** | Top of Casing | **Screen Setting (ft-bmp)** | NA to NA | **Casing Diameter (in.)** | 2 | **Well Casing Material** | PVC |
| **Static Water Level (ft-bmp)** | 33.88 | **Total Depth (ft-bmp)** | 37.4 | **Water Column (ft)** | 3.52 | **Gallons in Well** | 0.57 |
| **Pump Intake (ft-bmp)** | 34 | **Purge Method** | Low-Flow | **Sample Method** | | | Low-Flow |
| **Sample Time** | 13:00 | **Volumes Purged** | 1.67 | **Sample ID** | MW-3-W-200401 | **Sampled by** | Evan Wujcik |
| **Purge Start** | 12:24 | **Gallons Purged** | 0.95 | **Replicate/ Code No.** | MS/MSD | | |
| **Purge End** | 12:45 | | | | | | |

| Time | Minutes Elapsed | Rate (mL/min) | Depth to Water (ft) | Total Volume purged (ml) | pH (standard units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved Oxygen (mg/L) | Temperature (°C) | Redox (mV) | Appearance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Color | Odor |
| 12:27 | 0 | 300 | 33.74 | 900 | 7.46 | 2.75 | 0.0 | 2.54 | 4.24 | 55 | -- | -- |
| 12:30 | 3 | 300 | 33.72 | 1800 | 7.37 | 2.70 | 0.0 | 1.27 | 5.01 | 50 | -- | -- |
| 12:33 | 6 | 300 | 33.72 | 2700 | 7.39 | 2.70 | 0.0 | 1.14 | 5.20 | 46 | -- | -- |
| 12:36 | 9 | 300 | 33.72 | 3600 | 7.50 | 2.73 | 0.0 | 0.00 | 4.30 | 41 | -- | -- |

**Comments:** Well Sampled ; Blind duplicate not collected due to slow well recharge

**Well Casing Volume Conversion**

Well diameter (inches) = gallons per foot
1 = 0.04 1.5 = 0.09 2.5 = 0.26 3.5 = 0.50 6 = 1.47
1.25 = 0.06 2 = 0.16 3 = 0.37 4 = 0.65

**Sample Information**

Sample ID: MW-3-W-200401 Sample Time: 13:00 Sample Depth (ft-bmp): 34

Analytes and Methods: DRO AK102, Full-scan VOCs 8260

ft-bmp = feet below measuring point
in. = inches
ft = feet
mL/min = milliliters per minute

mS/cm = milliiSiemens per centimeter
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per liter

mV = millivolts
°F = degrees Fahrenheit
°C = degrees Celsius

# Groundwater Gauging Log

| | |
|---|---|
| **Client:** | Chevron |
| **Site ID:** | 91252 |
| **Site Location:** | 11836 Old Glenn Highway, Eagle River Alaska |
| **Date(s):** | 04/01/2020 |
| **Sampler(s):** | Evan Wujcik |

| Well ID | Date | Gauging Time | Static Water Level (ft bmp) | Depth to Product (ft bmp) | Total Depth (ft bmp) | PID Reading (ppm) | Comments |
|---|---|---|---|---|---|---|---|
| MW-1R | 04/01/2020 | 11:20 | 30.50 | -- | 38.4 | 0 | -- |
| MW-5 | 04/01/2020 | 11:22 | 31.68 | -- | 42.6 | 0.8 | Unable to collect a sample due to obstruction by ice |
| MW-2 | 04/01/2020 | 11:26 | 32.11 | -- | 38.7 | 0 | Unable To collect a sample due to obstruction by ice |
| MW-6 | 04/01/2020 | 11:31 | 31.41 | -- | 40.7 | 0 | -- |
| MW-4 | 04/01/2020 | 12:00 | 31.14 | -- | 44.4 | 0 | -- |
| MW-3 | 04/01/2020 | 12:04 | 33.88 | -- | 37.4 | 0 | Well Sampled ; Blind duplicate not collected due to slow well recharge |

# APPENDIX C

## Laboratory Analytical Results

Pace Analytical®
National Center for Testing & Innovation

# ANALYTICAL REPORT

April 16, 2020



## Arcadis - Chevron - AK

| | |
|---|---|
| Sample Delivery Group: | L1205746 |
| Samples Received: | 04/03/2020 |
| Project Number: | 30043248.5133 |
| Description: | 91252 |
| Site: | 91252 |
| Report To: | Nicole Monroe<br>880 H St.<br>Anchorage, AK 99501 |

Entire Report Reviewed By:

Brian Ford
Project Manager



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## EQB-1-W_200401 L1205746-01 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| | 04/01/20 12:00 | 04/03/20 08:30 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456237 | 1 | 04/06/20 15:06 | 04/06/20 15:06 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456395 | 1 | 04/08/20 03:55 | 04/08/20 03:55 | BRA | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method AK102 | WG1459498 | 1 | 04/13/20 00:20 | 04/14/20 09:46 | JN | Mt. Juliet, TN |

## MW-3-W_200401 L1205746-02 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| | 04/01/20 13:00 | 04/03/20 08:30 |

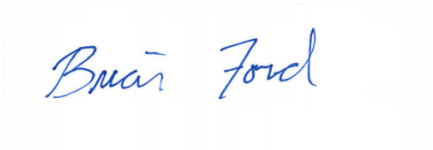
| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456237 | 1 | 04/06/20 16:23 | 04/06/20 16:23 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456395 | 1 | 04/08/20 04:19 | 04/08/20 04:19 | BRA | Mt. Juliet, TN |
| Semi-Volatile Organic Compounds (GC) by Method AK102 | WG1459498 | 1 | 04/13/20 00:20 | 04/14/20 10:07 | JN | Mt. Juliet, TN |

## TRIP BLANK_200401 L1205746-03 GW

| Collected by | Collected date/time | Received date/time |
|---|---|---|
| | 04/01/20 00:00 | 04/03/20 08:30 |

| Method | Batch | Dilution | Preparation date/time | Analysis date/time | Analyst | Location |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456237 | 1 | 04/06/20 15:26 | 04/06/20 15:26 | DWR | Mt. Juliet, TN |
| Volatile Organic Compounds (GC/MS) by Method 8260D | WG1456395 | 1 | 04/08/20 00:47 | 04/08/20 00:47 | BRA | Mt. Juliet, TN |

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

## Sample Delivery Group (SDG) Narrative

No extra volume received to perform Matrix Spike samples.

| Batch | Method | Lab Sample ID |
|---|---|---|
| WG1459498 | AK102 | L1205746-02 |

## Volatile Organic Compounds (GC/MS) by Method 8260D

The associated batch QC was below the established quality control range for accuracy.

| Batch | Lab Sample ID | Analytes |
|---|---|---|
| WG1456237 | (LCS) R3517489-1, (LCSD) R3517489-2, L1205746-01, 02, 03 | 1,4-Dichlorobenzene |

The associated batch QC was above the established quality control range for accuracy.

| Batch | Lab Sample ID | Analytes |
|---|---|---|
| WG1456237 | (LCS) R3517489-1, (LCSD) R3517489-2, L1205746-01, 02, 03 | Acrolein |

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

| Batch | Lab Sample ID | Analytes |
|---|---|---|
| WG1456237 | (MS) R3517489-4, (MSD) R3517489-5, L1205746-02 | 1,1,1-Trichloroethane, Acrolein, Bromodichloromethane, Carbon tetrachloride, Methyl tert-butyl ether and Tetrachloroethene |
| WG1456395 | (MS) R3516841-3, (MS) R3516841-5, (MSD) R3516841-4, L1205746-02 | 1,2,3-Trichloropropane |

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| 1,2,3-Trichloropropane | U | | 0.00200 | 0.00500 | 1 | 04/08/2020 03:55 | WG1456395 |
| Acetone | U | | 10.0 | 50.0 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2-Dibromoethane | U | | 0.00410 | 0.00500 | 1 | 04/08/2020 03:55 | WG1456395 |
| Acrolein | U | J4 | 8.87 | 50.0 | 1 | 04/06/2020 15:06 | WG1456237 |
| Acrylonitrile | U | | 1.87 | 10.0 | 1 | 04/06/2020 15:06 | WG1456237 |
| Benzene | U | | 0.331 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Bromobenzene | U | | 0.352 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Bromochloromethane | U | | 0.520 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Bromodichloromethane | 3.01 | | 0.380 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Bromoform | 0.670 | J | 0.469 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Bromomethane | U | | 0.866 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| n-Butylbenzene | U | | 0.361 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| sec-Butylbenzene | U | | 0.365 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| tert-Butylbenzene | U | | 0.399 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Carbon disulfide | U | | 0.275 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Carbon tetrachloride | U | | 0.379 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Chlorobenzene | U | | 0.348 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Chlorodibromomethane | 3.00 | | 0.327 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Chloroethane | U | | 0.453 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Chloroform | 1.48 | J | 0.324 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Chloromethane | U | | 0.276 | 2.50 | 1 | 04/06/2020 15:06 | WG1456237 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Dibromomethane | U | | 0.346 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,4-Dichlorobenzene | U | J4 | 0.274 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Di-isopropyl ether | U | | 0.320 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Ethylbenzene | U | | 0.384 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Isopropylbenzene | U | | 0.326 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| p-Isopropyltoluene | 0.632 | J | 0.350 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 2-Butanone (MEK) | U | J0 | 3.93 | 10.0 | 1 | 04/06/2020 15:06 | WG1456237 |
| Methylene Chloride | U | | 1.00 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 | 1 | 04/06/2020 15:06 | WG1456237 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| n-Propylbenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Styrene | U | | 0.307 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Tetrachloroethene | U | | 0.372 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Toluene | U | | 0.412 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Trichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Vinyl chloride | U | | 0.259 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| Xylenes, Total | U | | 1.06 | 3.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| o-Xylene | U | | 0.341 | 1.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| m&p-Xylene | U | | 0.719 | 2.00 | 1 | 04/06/2020 15:06 | WG1456237 |
| *(S) Toluene-d8* | *101* | | | *80.0-120* | | *04/06/2020 15:06* | WG1456237 |
| *(S) 4-Bromofluorobenzene* | *104* | | | *77.0-126* | | *04/06/2020 15:06* | WG1456237 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | | *70.0-130* | | *04/06/2020 15:06* | WG1456237 |

## Semi-Volatile Organic Compounds (GC) by Method AK102

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| AK102 DRO C10-C25 | 929 | | 229 | 800 | 1 | 04/14/2020 09:46 | WG1459498 |
| *(S) o-Terphenyl* | *76.0* | | | *50.0-150* | | *04/14/2020 09:46* | WG1459498 |

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| 1,2,3-Trichloropropane | U | J5 | 0.00200 | 0.00500 | 1 | 04/08/2020 04:19 | WG1456395 |
| Acetone | U | | 10.0 | 50.0 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2-Dibromoethane | U | | 0.00410 | 0.00500 | 1 | 04/08/2020 04:19 | WG1456395 |
| Acrolein | U | J4 J5 | 8.87 | 50.0 | 1 | 04/06/2020 16:23 | WG1456237 |
| Acrylonitrile | U | | 1.87 | 10.0 | 1 | 04/06/2020 16:23 | WG1456237 |
| Benzene | U | | 0.331 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Bromobenzene | U | | 0.352 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Bromochloromethane | U | | 0.520 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Bromodichloromethane | U | J5 | 0.380 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Bromoform | U | | 0.469 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Bromomethane | U | | 0.866 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| n-Butylbenzene | U | | 0.361 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| sec-Butylbenzene | U | | 0.365 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| tert-Butylbenzene | U | | 0.399 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Carbon disulfide | U | | 0.275 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Carbon tetrachloride | U | J5 | 0.379 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Chlorobenzene | U | | 0.348 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Chlorodibromomethane | U | | 0.327 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Chloroethane | U | | 0.453 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Chloroform | U | | 0.324 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Chloromethane | U | | 0.276 | 2.50 | 1 | 04/06/2020 16:23 | WG1456237 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Dibromomethane | U | | 0.346 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,4-Dichlorobenzene | U | J4 | 0.274 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Di-isopropyl ether | U | | 0.320 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Ethylbenzene | U | | 0.384 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Isopropylbenzene | U | | 0.326 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 2-Butanone (MEK) | U | J0 | 3.93 | 10.0 | 1 | 04/06/2020 16:23 | WG1456237 |
| Methylene Chloride | U | | 1.00 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 | 1 | 04/06/2020 16:23 | WG1456237 |
| Methyl tert-butyl ether | U | J5 | 0.367 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| n-Propylbenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Styrene | U | | 0.307 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Tetrachloroethene | U | J5 | 0.372 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Toluene | U | | 0.412 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1,1-Trichloroethane | U | J5 | 0.319 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Trichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Vinyl chloride | U | | 0.259 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| Xylenes, Total | U | | 1.06 | 3.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| o-Xylene | U | | 0.341 | 1.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| m&p-Xylene | U | | 0.719 | 2.00 | 1 | 04/06/2020 16:23 | WG1456237 |
| *(S) Toluene-d8* | *102* | | | *80.0-120* | | *04/06/2020 16:23* | WG1456237 |
| *(S) 4-Bromofluorobenzene* | *104* | | | *77.0-126* | | *04/06/2020 16:23* | WG1456237 |
| *(S) 1,2-Dichloroethane-d4* | *100* | | | *70.0-130* | | *04/06/2020 16:23* | WG1456237 |

## Semi-Volatile Organic Compounds (GC) by Method AK102

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| AK102 DRO C10-C25 | U | | 229 | 800 | 1 | 04/14/2020 10:07 | WG1459498 |
| *(S) o-Terphenyl* | *75.9* | | | *50.0-150* | | *04/14/2020 10:07* | WG1459498 |

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| 1,2,3-Trichloropropane | U | | 0.00200 | 0.00500 | 1 | 04/08/2020 00:47 | WG1456395 |
| Acetone | U | | 10.0 | 50.0 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2-Dibromoethane | U | | 0.00410 | 0.00500 | 1 | 04/08/2020 00:47 | WG1456395 |
| Acrolein | U | J4 | 8.87 | 50.0 | 1 | 04/06/2020 15:26 | WG1456237 |
| Acrylonitrile | U | | 1.87 | 10.0 | 1 | 04/06/2020 15:26 | WG1456237 |
| Benzene | U | | 0.331 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Bromobenzene | U | | 0.352 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Bromochloromethane | U | | 0.520 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Bromodichloromethane | U | | 0.380 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Bromoform | U | | 0.469 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Bromomethane | U | | 0.866 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| n-Butylbenzene | U | | 0.361 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| sec-Butylbenzene | U | | 0.365 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| tert-Butylbenzene | U | | 0.399 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Carbon disulfide | U | | 0.275 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Carbon tetrachloride | U | | 0.379 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Chlorobenzene | U | | 0.348 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Chlorodibromomethane | U | | 0.327 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Chloroethane | U | | 0.453 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Chloroform | U | | 0.324 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Chloromethane | U | | 0.276 | 2.50 | 1 | 04/06/2020 15:26 | WG1456237 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Dibromomethane | U | | 0.346 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,4-Dichlorobenzene | U | J4 | 0.274 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Di-isopropyl ether | U | | 0.320 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Ethylbenzene | U | | 0.384 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Isopropylbenzene | U | | 0.326 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 2-Butanone (MEK) | U | J0 | 3.93 | 10.0 | 1 | 04/06/2020 15:26 | WG1456237 |
| Methylene Chloride | U | | 1.00 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 | 1 | 04/06/2020 15:26 | WG1456237 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Naphthalene | U | | 1.00 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| n-Propylbenzene | U | | 0.349 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Styrene | U | | 0.307 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Tetrachloroethene | U | | 0.372 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

## Volatile Organic Compounds (GC/MS) by Method 8260D

| Analyte | Result | Qualifier | MDL | RDL | Dilution | Analysis | Batch |
|---|---|---|---|---|---|---|---|
| | ug/l | | ug/l | ug/l | | date / time | |
| Toluene | U | | 0.412 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Trichloroethene | U | | 0.398 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Vinyl chloride | U | | 0.259 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| Xylenes, Total | U | | 1.06 | 3.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| o-Xylene | U | | 0.341 | 1.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| m&p-Xylene | U | | 0.719 | 2.00 | 1 | 04/06/2020 15:26 | WG1456237 |
| *(S) Toluene-d8* | *100* | | | *80.0-120* | | *04/06/2020 15:26* | WG1456237 |
| *(S) 4-Bromofluorobenzene* | *103* | | | *77.0-126* | | *04/06/2020 15:26* | WG1456237 |
| *(S) 1,2-Dichloroethane-d4* | *101* | | | *70.0-130* | | *04/06/2020 15:26* | WG1456237 |

## Method Blank (MB)

(MB) R3517489-3 04/06/20 13:02

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Acetone | U | | 10.0 | 50.0 |
| Acrolein | U | | 8.87 | 50.0 |
| Acrylonitrile | U | | 1.87 | 10.0 |
| Benzene | U | | 0.331 | 1.00 |
| Bromobenzene | U | | 0.352 | 1.00 |
| Bromodichloromethane | U | | 0.380 | 1.00 |
| Bromochloromethane | U | | 0.520 | 5.00 |
| Bromoform | U | | 0.469 | 1.00 |
| Bromomethane | U | | 0.866 | 5.00 |
| n-Butylbenzene | U | | 0.361 | 1.00 |
| sec-Butylbenzene | U | | 0.365 | 1.00 |
| tert-Butylbenzene | U | | 0.399 | 1.00 |
| Carbon disulfide | U | | 0.275 | 1.00 |
| Carbon tetrachloride | U | | 0.379 | 1.00 |
| Chlorobenzene | U | | 0.348 | 1.00 |
| Chlorodibromomethane | U | | 0.327 | 1.00 |
| Chloroethane | U | | 0.453 | 5.00 |
| Chloroform | U | | 0.324 | 5.00 |
| Chloromethane | U | | 0.276 | 2.50 |
| 2-Chlorotoluene | U | | 0.375 | 1.00 |
| 4-Chlorotoluene | U | | 0.351 | 1.00 |
| 1,2-Dibromo-3-Chloropropane | U | | 1.33 | 5.00 |
| Dibromomethane | U | | 0.346 | 1.00 |
| 1,2-Dichlorobenzene | U | | 0.349 | 1.00 |
| 1,3-Dichlorobenzene | U | | 0.220 | 1.00 |
| 1,4-Dichlorobenzene | U | | 0.274 | 1.00 |
| Dichlorodifluoromethane | U | | 0.551 | 5.00 |
| 1,1-Dichloroethane | U | | 0.259 | 1.00 |
| 1,2-Dichloroethane | U | | 0.361 | 1.00 |
| 1,1-Dichloroethene | U | | 0.398 | 1.00 |
| cis-1,2-Dichloroethene | U | | 0.260 | 1.00 |
| trans-1,2-Dichloroethene | U | | 0.396 | 1.00 |
| 1,2-Dichloropropane | U | | 0.306 | 1.00 |
| 1,1-Dichloropropene | U | | 0.352 | 1.00 |
| 1,3-Dichloropropane | U | | 0.366 | 1.00 |
| cis-1,3-Dichloropropene | U | | 0.418 | 1.00 |
| trans-1,3-Dichloropropene | U | | 0.419 | 1.00 |
| 2,2-Dichloropropane | U | | 0.321 | 1.00 |
| Di-isopropyl ether | U | | 0.320 | 1.00 |
| Ethylbenzene | U | | 0.384 | 1.00 |

## Method Blank (MB)

(MB) R3517489-3 04/06/20 13:02

| Analyte | MB Result ug/l | MB Qualifier | MB MDL ug/l | MB RDL ug/l |
|---|---|---|---|---|
| Hexachloro-1,3-butadiene | U | | 0.256 | 1.00 |
| Isopropylbenzene | U | | 0.326 | 1.00 |
| p-Isopropyltoluene | U | | 0.350 | 1.00 |
| 2-Butanone (MEK) | U | | 3.93 | 10.0 |
| Methylene Chloride | U | | 1.00 | 5.00 |
| 4-Methyl-2-pentanone (MIBK) | U | | 2.14 | 10.0 |
| Methyl tert-butyl ether | U | | 0.367 | 1.00 |
| Naphthalene | U | | 1.00 | 5.00 |
| n-Propylbenzene | U | | 0.349 | 1.00 |
| Styrene | U | | 0.307 | 1.00 |
| 1,1,1,2-Tetrachloroethane | U | | 0.385 | 1.00 |
| 1,1,2,2-Tetrachloroethane | U | | 0.130 | 1.00 |
| Tetrachloroethene | U | | 0.372 | 1.00 |
| Toluene | U | | 0.412 | 1.00 |
| 1,1,2-Trichlorotrifluoroethane | U | | 0.303 | 1.00 |
| 1,2,3-Trichlorobenzene | U | | 0.230 | 1.00 |
| 1,2,4-Trichlorobenzene | U | | 0.355 | 1.00 |
| 1,1,1-Trichloroethane | U | | 0.319 | 1.00 |
| 1,1,2-Trichloroethane | U | | 0.383 | 1.00 |
| Trichloroethene | U | | 0.398 | 1.00 |
| Trichlorofluoromethane | U | | 1.20 | 5.00 |
| 1,2,3-Trimethylbenzene | U | | 0.321 | 1.00 |
| 1,2,4-Trimethylbenzene | U | | 0.373 | 1.00 |
| 1,3,5-Trimethylbenzene | U | | 0.387 | 1.00 |
| Vinyl chloride | U | | 0.259 | 1.00 |
| Xylenes, Total | U | | 1.06 | 3.00 |
| o-Xylene | U | | 0.341 | 1.00 |
| m&p-Xylenes | U | | 0.719 | 2.00 |
| *(S) Toluene-d8* | *102* | | | *80.0-120* |
| *(S) 4-Bromofluorobenzene* | *102* | | | *77.0-126* |
| *(S) 1,2-Dichloroethane-d4* | *95.8* | | | *70.0-130* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3517489-1 04/06/20 12:04 • (LCSD) R3517489-2 04/06/20 12:23

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 25.0 | 16.8 | 17.3 | 67.2 | 69.2 | 19.0-160 | | | 2.93 | 27 |
| Acrolein | 25.0 | 84.4 | 66.8 | 338 | 267 | 10.0-160 | J4 | J4 | 23.3 | 26 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3517489-1 04/06/20 12:04 • (LCSD) R3517489-2 04/06/20 12:23

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| Acrylonitrile | 25.0 | 26.7 | 26.2 | 107 | 105 | 55.0-149 | | | 1.89 | 20 |
| Benzene | 5.00 | 4.55 | 4.53 | 91.0 | 90.6 | 70.0-123 | | | 0.441 | 20 |
| Bromobenzene | 5.00 | 4.99 | 4.96 | 99.8 | 99.2 | 73.0-121 | | | 0.603 | 20 |
| Bromodichloromethane | 5.00 | 5.56 | 5.55 | 111 | 111 | 75.0-120 | | | 0.180 | 20 |
| Bromochloromethane | 5.00 | 4.61 | 4.67 | 92.2 | 93.4 | 76.0-122 | | | 1.29 | 20 |
| Bromoform | 5.00 | 4.45 | 4.47 | 89.0 | 89.4 | 68.0-132 | | | 0.448 | 20 |
| Bromomethane | 5.00 | 5.04 | 4.94 | 101 | 98.8 | 10.0-160 | | | 2.00 | 25 |
| n-Butylbenzene | 5.00 | 3.94 | 3.83 | 78.8 | 76.6 | 73.0-125 | | | 2.83 | 20 |
| sec-Butylbenzene | 5.00 | 4.49 | 4.41 | 89.8 | 88.2 | 75.0-125 | | | 1.80 | 20 |
| tert-Butylbenzene | 5.00 | 4.68 | 4.64 | 93.6 | 92.8 | 76.0-124 | | | 0.858 | 20 |
| Carbon disulfide | 5.00 | 4.36 | 4.35 | 87.2 | 87.0 | 61.0-128 | | | 0.230 | 20 |
| Carbon tetrachloride | 5.00 | 4.88 | 5.37 | 97.6 | 107 | 68.0-126 | | | 9.56 | 20 |
| Chlorobenzene | 5.00 | 4.15 | 4.19 | 83.0 | 83.8 | 80.0-121 | | | 0.959 | 20 |
| Chlorodibromomethane | 5.00 | 4.53 | 4.60 | 90.6 | 92.0 | 77.0-125 | | | 1.53 | 20 |
| Chloroethane | 5.00 | 5.48 | 5.18 | 110 | 104 | 47.0-150 | | | 5.63 | 20 |
| Chloroform | 5.00 | 5.14 | 4.87 | 103 | 97.4 | 73.0-120 | | | 5.39 | 20 |
| Chloromethane | 5.00 | 5.21 | 4.76 | 104 | 95.2 | 41.0-142 | | | 9.03 | 20 |
| 2-Chlorotoluene | 5.00 | 4.17 | 4.05 | 83.4 | 81.0 | 76.0-123 | | | 2.92 | 20 |
| 4-Chlorotoluene | 5.00 | 4.51 | 4.48 | 90.2 | 89.6 | 75.0-122 | | | 0.667 | 20 |
| 1,2-Dibromo-3-Chloropropane | 5.00 | 3.91 | 3.82 | 78.2 | 76.4 | 58.0-134 | | | 2.33 | 20 |
| Dibromomethane | 5.00 | 5.81 | 5.81 | 116 | 116 | 80.0-120 | | | 0.000 | 20 |
| 1,2-Dichlorobenzene | 5.00 | 4.87 | 4.95 | 97.4 | 99.0 | 79.0-121 | | | 1.63 | 20 |
| 1,3-Dichlorobenzene | 5.00 | 4.44 | 4.34 | 88.8 | 86.8 | 79.0-120 | | | 2.28 | 20 |
| 1,4-Dichlorobenzene | 5.00 | 3.80 | 3.88 | 76.0 | 77.6 | 79.0-120 | J4 | J4 | 2.08 | 20 |
| Dichlorodifluoromethane | 5.00 | 5.40 | 5.07 | 108 | 101 | 51.0-149 | | | 6.30 | 20 |
| 1,1-Dichloroethane | 5.00 | 5.24 | 5.39 | 105 | 108 | 70.0-126 | | | 2.82 | 20 |
| 1,2-Dichloroethane | 5.00 | 4.96 | 5.06 | 99.2 | 101 | 70.0-128 | | | 2.00 | 20 |
| 1,1-Dichloroethene | 5.00 | 4.01 | 4.07 | 80.2 | 81.4 | 71.0-124 | | | 1.49 | 20 |
| cis-1,2-Dichloroethene | 5.00 | 5.64 | 5.80 | 113 | 116 | 73.0-120 | | | 2.80 | 20 |
| trans-1,2-Dichloroethene | 5.00 | 4.72 | 4.90 | 94.4 | 98.0 | 73.0-120 | | | 3.74 | 20 |
| 1,2-Dichloropropane | 5.00 | 4.34 | 4.53 | 86.8 | 90.6 | 77.0-125 | | | 4.28 | 20 |
| 1,1-Dichloropropene | 5.00 | 4.27 | 4.23 | 85.4 | 84.6 | 74.0-126 | | | 0.941 | 20 |
| 1,3-Dichloropropane | 5.00 | 4.77 | 4.84 | 95.4 | 96.8 | 80.0-120 | | | 1.46 | 20 |
| cis-1,3-Dichloropropene | 5.00 | 4.15 | 4.16 | 83.0 | 83.2 | 80.0-123 | | | 0.241 | 20 |
| trans-1,3-Dichloropropene | 5.00 | 4.33 | 4.40 | 86.6 | 88.0 | 78.0-124 | | | 1.60 | 20 |
| 2,2-Dichloropropane | 5.00 | 4.46 | 4.53 | 89.2 | 90.6 | 58.0-130 | | | 1.56 | 20 |
| Di-isopropyl ether | 5.00 | 4.93 | 5.09 | 98.6 | 102 | 58.0-138 | | | 3.19 | 20 |
| Ethylbenzene | 5.00 | 4.38 | 4.32 | 87.6 | 86.4 | 79.0-123 | | | 1.38 | 20 |
| Hexachloro-1,3-butadiene | 5.00 | 4.69 | 4.67 | 93.8 | 93.4 | 54.0-138 | | | 0.427 | 20 |
| Isopropylbenzene | 5.00 | 4.38 | 4.30 | 87.6 | 86.0 | 76.0-127 | | | 1.84 | 20 |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3517489-1 04/06/20 12:04 • (LCSD) R3517489-2 04/06/20 12:23

| Analyte | Spike Amount ug/l | LCS Result ug/l | LCSD Result ug/l | LCS Rec. % | LCSD Rec. % | Rec. Limits % | LCS Qualifier | LCSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|
| p-Isopropyltoluene | 5.00 | 4.24 | 4.09 | 84.8 | 81.8 | 76.0-125 | | | 3.60 | 20 |
| 2-Butanone (MEK) | 25.0 | 19.5 | 19.4 | 78.0 | 77.6 | 44.0-160 | | | 0.514 | 20 |
| Methylene Chloride | 5.00 | 4.76 | 5.10 | 95.2 | 102 | 67.0-120 | | | 6.90 | 20 |
| 4-Methyl-2-pentanone (MIBK) | 25.0 | 23.5 | 23.5 | 94.0 | 94.0 | 68.0-142 | | | 0.000 | 20 |
| Methyl tert-butyl ether | 5.00 | 5.28 | 5.68 | 106 | 114 | 68.0-125 | | | 7.30 | 20 |
| Naphthalene | 5.00 | 4.43 | 4.47 | 88.6 | 89.4 | 54.0-135 | | | 0.899 | 20 |
| n-Propylbenzene | 5.00 | 4.69 | 4.69 | 93.8 | 93.8 | 77.0-124 | | | 0.000 | 20 |
| Styrene | 5.00 | 5.02 | 4.94 | 100 | 98.8 | 73.0-130 | | | 1.61 | 20 |
| 1,1,1,2-Tetrachloroethane | 5.00 | 4.40 | 4.34 | 88.0 | 86.8 | 75.0-125 | | | 1.37 | 20 |
| 1,1,2,2-Tetrachloroethane | 5.00 | 5.08 | 4.94 | 102 | 98.8 | 65.0-130 | | | 2.79 | 20 |
| Tetrachloroethene | 5.00 | 6.24 | 6.09 | 125 | 122 | 72.0-132 | | | 2.43 | 20 |
| Toluene | 5.00 | 4.62 | 4.68 | 92.4 | 93.6 | 79.0-120 | | | 1.29 | 20 |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | 4.73 | 4.64 | 94.6 | 92.8 | 69.0-132 | | | 1.92 | 20 |
| 1,2,3-Trichlorobenzene | 5.00 | 4.37 | 4.36 | 87.4 | 87.2 | 50.0-138 | | | 0.229 | 20 |
| 1,2,4-Trichlorobenzene | 5.00 | 4.16 | 4.07 | 83.2 | 81.4 | 57.0-137 | | | 2.19 | 20 |
| 1,1,1-Trichloroethane | 5.00 | 6.12 | 6.14 | 122 | 123 | 73.0-124 | | | 0.326 | 20 |
| 1,1,2-Trichloroethane | 5.00 | 4.13 | 4.15 | 82.6 | 83.0 | 80.0-120 | | | 0.483 | 20 |
| Trichloroethene | 5.00 | 4.79 | 4.81 | 95.8 | 96.2 | 78.0-124 | | | 0.417 | 20 |
| Trichlorofluoromethane | 5.00 | 3.85 | 4.16 | 77.0 | 83.2 | 59.0-147 | | | 7.74 | 20 |
| 1,2,3-Trimethylbenzene | 5.00 | 4.23 | 4.14 | 84.6 | 82.8 | 77.0-120 | | | 2.15 | 20 |
| 1,2,4-Trimethylbenzene | 5.00 | 5.03 | 5.17 | 101 | 103 | 76.0-121 | | | 2.75 | 20 |
| 1,3,5-Trimethylbenzene | 5.00 | 4.82 | 4.81 | 96.4 | 96.2 | 76.0-122 | | | 0.208 | 20 |
| Vinyl chloride | 5.00 | 5.14 | 5.15 | 103 | 103 | 67.0-131 | | | 0.194 | 20 |
| Xylenes, Total | 15.0 | 13.7 | 13.4 | 91.3 | 89.3 | 79.0-123 | | | 2.21 | 20 |
| o-Xylene | 5.00 | 4.46 | 4.50 | 89.2 | 90.0 | 80.0-122 | | | 0.893 | 20 |
| m&p-Xylenes | 10.0 | 9.19 | 8.91 | 91.9 | 89.1 | 80.0-122 | | | 3.09 | 20 |
| *(S) Toluene-d8* | | | | *101* | *102* | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | *103* | *103* | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | *99.2* | *100* | *70.0-130* | | | | |

## L1205746-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1205746-02 04/06/20 16:23 • (MS) R3517489-4 04/06/20 21:27 • (MSD) R3517489-5 04/06/20 21:46

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetone | 25.0 | U | 20.7 | 23.4 | 82.8 | 93.6 | 1 | 10.0-160 | | | 12.2 | 35 |
| Acrolein | 25.0 | U | 75.5 | 89.4 | 302 | 358 | 1 | 10.0-160 | J5 | J5 | 16.9 | 39 |
| Acrylonitrile | 25.0 | U | 24.7 | 32.9 | 98.8 | 132 | 1 | 21.0-160 | | | 28.5 | 32 |
| Benzene | 5.00 | U | 5.73 | 6.48 | 115 | 130 | 1 | 17.0-158 | | | 12.3 | 27 |

## L1205746-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1205746-02 04/06/20 16:23 • (MS) R3517489-4 04/06/20 21:27 • (MSD) R3517489-5 04/06/20 21:46

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 5.00 | U | 5.74 | 6.43 | 115 | 129 | 1 | 30.0-149 | | | 11.3 | 28 |
| Bromodichloromethane | 5.00 | U | 6.86 | 7.72 | 137 | 154 | 1 | 31.0-150 | | J5 | 11.8 | 27 |
| Bromochloromethane | 5.00 | U | 5.80 | 6.38 | 116 | 128 | 1 | 38.0-142 | | | 9.52 | 26 |
| Bromoform | 5.00 | U | 5.35 | 5.74 | 107 | 115 | 1 | 29.0-150 | | | 7.03 | 29 |
| Bromomethane | 5.00 | U | 6.33 | 7.02 | 127 | 140 | 1 | 10.0-160 | | | 10.3 | 38 |
| n-Butylbenzene | 5.00 | U | 4.88 | 5.35 | 97.6 | 107 | 1 | 31.0-150 | | | 9.19 | 30 |
| sec-Butylbenzene | 5.00 | U | 5.62 | 6.23 | 112 | 125 | 1 | 33.0-155 | | | 10.3 | 29 |
| tert-Butylbenzene | 5.00 | U | 5.81 | 6.41 | 116 | 128 | 1 | 34.0-153 | | | 9.82 | 28 |
| Carbon disulfide | 5.00 | U | 5.61 | 6.39 | 112 | 128 | 1 | 10.0-156 | | | 13.0 | 28 |
| Carbon tetrachloride | 5.00 | U | 7.00 | 8.02 | 140 | 160 | 1 | 23.0-159 | | J5 | 13.6 | 28 |
| Chlorobenzene | 5.00 | U | 5.03 | 5.61 | 101 | 112 | 1 | 33.0-152 | | | 10.9 | 27 |
| Chlorodibromomethane | 5.00 | U | 5.58 | 6.27 | 112 | 125 | 1 | 37.0-149 | | | 11.6 | 27 |
| Chloroethane | 5.00 | U | 6.75 | 7.48 | 135 | 150 | 1 | 10.0-160 | | | 10.3 | 30 |
| Chloroform | 5.00 | U | 6.28 | 6.97 | 126 | 139 | 1 | 29.0-154 | | | 10.4 | 28 |
| Chloromethane | 5.00 | U | 6.39 | 7.14 | 128 | 143 | 1 | 10.0-160 | | | 11.1 | 29 |
| 2-Chlorotoluene | 5.00 | U | 5.11 | 5.77 | 102 | 115 | 1 | 32.0-153 | | | 12.1 | 28 |
| 4-Chlorotoluene | 5.00 | U | 5.50 | 6.05 | 110 | 121 | 1 | 32.0-150 | | | 9.52 | 28 |
| 1,2-Dibromo-3-Chloropropane | 5.00 | U | 4.96 | 5.28 | 99.2 | 106 | 1 | 22.0-151 | | | 6.25 | 34 |
| Dibromomethane | 5.00 | U | 6.54 | 7.21 | 131 | 144 | 1 | 30.0-151 | | | 9.75 | 27 |
| 1,2-Dichlorobenzene | 5.00 | U | 5.95 | 6.61 | 119 | 132 | 1 | 34.0-149 | | | 10.5 | 28 |
| 1,3-Dichlorobenzene | 5.00 | U | 5.34 | 5.92 | 107 | 118 | 1 | 36.0-146 | | | 10.3 | 27 |
| 1,4-Dichlorobenzene | 5.00 | U | 4.77 | 5.25 | 95.4 | 105 | 1 | 35.0-142 | | | 9.58 | 27 |
| Dichlorodifluoromethane | 5.00 | U | 7.08 | 7.68 | 142 | 154 | 1 | 10.0-160 | | | 8.13 | 29 |
| 1,1-Dichloroethane | 5.00 | U | 6.76 | 7.35 | 135 | 147 | 1 | 25.0-158 | | | 8.36 | 27 |
| 1,2-Dichloroethane | 5.00 | U | 6.24 | 6.73 | 125 | 135 | 1 | 29.0-151 | | | 7.56 | 27 |
| 1,1-Dichloroethene | 5.00 | U | 5.12 | 6.34 | 102 | 127 | 1 | 11.0-160 | | | 21.3 | 29 |
| cis-1,2-Dichloroethene | 5.00 | U | 6.94 | 7.74 | 139 | 155 | 1 | 10.0-160 | | | 10.9 | 27 |
| trans-1,2-Dichloroethene | 5.00 | U | 5.97 | 7.20 | 119 | 144 | 1 | 17.0-153 | | | 18.7 | 27 |
| 1,2-Dichloropropane | 5.00 | U | 5.56 | 6.19 | 111 | 124 | 1 | 30.0-156 | | | 10.7 | 27 |
| 1,1-Dichloropropene | 5.00 | U | 5.21 | 6.04 | 104 | 121 | 1 | 25.0-158 | | | 14.8 | 27 |
| 1,3-Dichloropropane | 5.00 | U | 5.85 | 6.49 | 117 | 130 | 1 | 38.0-147 | | | 10.4 | 27 |
| cis-1,3-Dichloropropene | 5.00 | U | 4.96 | 5.59 | 99.2 | 112 | 1 | 34.0-149 | | | 11.9 | 28 |
| trans-1,3-Dichloropropene | 5.00 | U | 5.16 | 5.77 | 103 | 115 | 1 | 32.0-149 | | | 11.2 | 28 |
| 2,2-Dichloropropane | 5.00 | U | 6.07 | 6.94 | 121 | 139 | 1 | 24.0-152 | | | 13.4 | 29 |
| Di-isopropyl ether | 5.00 | U | 6.45 | 7.11 | 129 | 142 | 1 | 21.0-160 | | | 9.73 | 28 |
| Ethylbenzene | 5.00 | U | 5.38 | 5.99 | 108 | 120 | 1 | 30.0-155 | | | 10.7 | 27 |
| Hexachloro-1,3-butadiene | 5.00 | U | 5.55 | 5.78 | 111 | 116 | 1 | 20.0-154 | | | 4.06 | 34 |
| Isopropylbenzene | 5.00 | U | 5.61 | 6.26 | 112 | 125 | 1 | 28.0-157 | | | 11.0 | 27 |
| p-Isopropyltoluene | 5.00 | U | 5.17 | 5.77 | 103 | 115 | 1 | 30.0-154 | | | 11.0 | 29 |
| 2-Butanone (MEK) | 25.0 | U | 27.9 | 26.6 | 112 | 106 | 1 | 10.0-160 | | | 4.77 | 32 |

## L1205746-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1205746-02 04/06/20 16:23 • (MS) R3517489-4 04/06/20 21:27 • (MSD) R3517489-5 04/06/20 21:46

| Analyte | Spike Amount ug/l | Original Result ug/l | MS Result ug/l | MSD Result ug/l | MS Rec. % | MSD Rec. % | Dilution | Rec. Limits % | MS Qualifier | MSD Qualifier | RPD % | RPD Limits % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | 5.00 | U | 5.58 | 6.03 | 112 | 121 | 1 | 23.0-144 | | | 7.75 | 28 |
| 4-Methyl-2-pentanone (MIBK) | 25.0 | U | 28.8 | 31.1 | 115 | 124 | 1 | 29.0-160 | | | 7.68 | 29 |
| Methyl tert-butyl ether | 5.00 | U | 6.62 | 7.90 | 132 | 158 | 1 | 28.0-150 | | J5 | 17.6 | 29 |
| Naphthalene | 5.00 | U | 5.60 | 6.20 | 112 | 124 | 1 | 12.0-156 | | | 10.2 | 35 |
| n-Propylbenzene | 5.00 | U | 5.92 | 6.51 | 118 | 130 | 1 | 31.0-154 | | | 9.49 | 28 |
| Styrene | 5.00 | U | 6.10 | 6.75 | 122 | 135 | 1 | 33.0-155 | | | 10.1 | 28 |
| 1,1,1,2-Tetrachloroethane | 5.00 | U | 5.49 | 6.01 | 110 | 120 | 1 | 36.0-151 | | | 9.04 | 29 |
| 1,1,2,2-Tetrachloroethane | 5.00 | U | 6.29 | 6.77 | 126 | 135 | 1 | 33.0-150 | | | 7.35 | 28 |
| Tetrachloroethene | 5.00 | U | 7.76 | 8.54 | 155 | 171 | 1 | 10.0-160 | | J5 | 9.57 | 27 |
| Toluene | 5.00 | U | 5.76 | 6.43 | 115 | 129 | 1 | 26.0-154 | | | 11.0 | 28 |
| 1,1,2-Trichlorotrifluoroethane | 5.00 | U | 6.20 | 7.45 | 124 | 149 | 1 | 23.0-160 | | | 18.3 | 30 |
| 1,2,3-Trichlorobenzene | 5.00 | U | 5.33 | 5.77 | 107 | 115 | 1 | 17.0-150 | | | 7.93 | 36 |
| 1,2,4-Trichlorobenzene | 5.00 | U | 5.17 | 5.55 | 103 | 111 | 1 | 24.0-150 | | | 7.09 | 33 |
| 1,1,1-Trichloroethane | 5.00 | U | 7.96 | 8.77 | 159 | 175 | 1 | 23.0-160 | | J5 | 9.68 | 28 |
| 1,1,2-Trichloroethane | 5.00 | U | 4.85 | 5.49 | 97.0 | 110 | 1 | 35.0-147 | | | 12.4 | 27 |
| Trichloroethene | 5.00 | U | 5.80 | 6.54 | 116 | 131 | 1 | 10.0-160 | | | 12.0 | 25 |
| Trichlorofluoromethane | 5.00 | U | 5.32 | 6.44 | 106 | 129 | 1 | 17.0-160 | | | 19.0 | 31 |
| 1,2,3-Trimethylbenzene | 5.00 | U | 5.33 | 5.66 | 107 | 113 | 1 | 32.0-149 | | | 6.01 | 28 |
| 1,2,4-Trimethylbenzene | 5.00 | U | 6.43 | 7.15 | 129 | 143 | 1 | 26.0-154 | | | 10.6 | 27 |
| 1,3,5-Trimethylbenzene | 5.00 | U | 6.05 | 6.76 | 121 | 135 | 1 | 28.0-153 | | | 11.1 | 27 |
| Vinyl chloride | 5.00 | U | 6.65 | 7.55 | 133 | 151 | 1 | 10.0-160 | | | 12.7 | 27 |
| Xylenes, Total | 15.0 | U | 17.3 | 19.0 | 115 | 127 | 1 | 29.0-154 | | | 9.37 | 28 |
| o-Xylene | 5.00 | U | 5.69 | 6.28 | 114 | 126 | 1 | 45.0-144 | | | 9.86 | 26 |
| m&p-Xylenes | 10.0 | U | 11.6 | 12.7 | 116 | 127 | 1 | 43.0-146 | | | 9.05 | 26 |
| *(S) Toluene-d8* | | | | | *101* | *99.8* | | *80.0-120* | | | | |
| *(S) 4-Bromofluorobenzene* | | | | | *100* | *100* | | *77.0-126* | | | | |
| *(S) 1,2-Dichloroethane-d4* | | | | | *97.8* | *97.1* | | *70.0-130* | | | | |

## Method Blank (MB)

(MB) R3516841-2 04/08/20 00:23

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| | ug/l | | ug/l | ug/l |
| 1,2,3-Trichloropropane | U | | 0.00200 | 0.00500 |
| 1,2-Dibromoethane | U | | 0.00410 | 0.00500 |

## Laboratory Control Sample (LCS)

(LCS) R3516841-1 04/07/20 23:36

| Analyte | Spike Amount | LCS Result | LCS Rec. | Rec. Limits | LCS Qualifier |
|---|---|---|---|---|---|
| | ug/l | ug/l | % | % | |
| 1,2,3-Trichloropropane | 0.0500 | 0.0650 | 130 | 70.0-130 | |
| 1,2-Dibromoethane | 0.0500 | 0.0590 | 118 | 70.0-130 | |

## L1205291-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1205291-03 04/08/20 02:21 • (MS) R3516841-3 04/08/20 06:40 • (MSD) R3516841-4 04/08/20 07:04

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| 1,2,3-Trichloropropane | 0.0500 | U | 0.0710 | 0.0680 | 142 | 136 | 1 | 70.0-130 | J5 | J5 | 4.32 | 20 |
| 1,2-Dibromoethane | 0.0500 | U | 0.0640 | 0.0540 | 128 | 108 | 1 | 70.0-130 | | | 16.9 | 20 |

## L1205746-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1205746-02 04/08/20 04:19 • (MS) R3516841-5 04/08/20 07:27 • (MSD) R3516841-6 04/08/20 07:51

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| 1,2,3-Trichloropropane | 0.0500 | U | 0.0700 | 0.0630 | 140 | 126 | 1 | 70.0-130 | J5 | | 10.5 | 20 |
| 1,2-Dibromoethane | 0.0500 | U | 0.0520 | 0.0580 | 104 | 116 | 1 | 70.0-130 | | | 10.9 | 20 |

## L1206274-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1206274-04 04/08/20 05:53 • (MS) R3516841-7 04/08/20 08:15 • (MSD) R3516841-8 04/08/20 08:38

| Analyte | Spike Amount | Original Result | MS Result | MSD Result | MS Rec. | MSD Rec. | Dilution | Rec. Limits | MS Qualifier | MSD Qualifier | RPD | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ug/l | ug/l | ug/l | ug/l | % | % | | % | | | % | % |
| 1,2,3-Trichloropropane | 0.0500 | U | 0.0650 | 0.0640 | 130 | 128 | 1 | 70.0-130 | | | 1.55 | 20 |
| 1,2-Dibromoethane | 0.0500 | U | 0.0650 | 0.0610 | 130 | 122 | 1 | 70.0-130 | | | 6.35 | 20 |

## Method Blank (MB)

(MB) R3518428-1 04/13/20 12:36

| Analyte | MB Result | MB Qualifier | MB MDL | MB RDL |
|---|---|---|---|---|
| | ug/l | | ug/l | ug/l |
| AK102 DRO C10-C25 | U | | 229 | 800 |
| *(S) o-Terphenyl* | *76.8* | | | *60.0-120* |

## Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3518428-2 04/13/20 12:56 • (LCSD) R3518428-3 04/13/20 13:17

| Analyte | Spike Amount | LCS Result | LCSD Result | LCS Rec. | LCSD Rec. | Rec. Limits | LCS Qualifier | LCSD Qualifier | RPD | RPD Limits |
|---|---|---|---|---|---|---|---|---|---|---|
| | ug/l | ug/l | ug/l | % | % | % | | | % | % |
| AK102 DRO C10-C25 | 3000 | 2610 | 2640 | 87.0 | 88.0 | 75.0-125 | | | 1.14 | 20 |
| *(S) o-Terphenyl* | | | | *93.3* | *96.5* | *60.0-120* | | | | |

## Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

## Abbreviations and Definitions

| | |
|---|---|
| MDL | Method Detection Limit. |
| RDL | Reported Detection Limit. |
| Rec. | Recovery. |
| RPD | Relative Percent Difference. |
| SDG | Sample Delivery Group. |
| (S) | Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media. |
| U | Not detected at the Reporting Limit (or MDL where applicable). |
| Analyte | The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported. |
| Dilution | If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor. |
| Limits | These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges. |
| Original Sample | The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG. |
| Qualifier | This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable. |
| Result | The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte. |
| Uncertainty (Radiochemistry) | Confidence level of 2 sigma. |
| Case Narrative (Cn) | A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report. |
| Quality Control Summary (Qc) | This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material. |
| Sample Chain of Custody (Sc) | This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis. |
| Sample Results (Sr) | This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported. |
| Sample Summary (Ss) | This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis. |

| Qualifier | Description |
|---|---|
| J | The identification of the analyte is acceptable; the reported value is an estimate. |
| J0 | J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration met method criteria. |
| J4 | The associated batch QC was outside the established quality control range for accuracy. |
| J5 | The sample matrix interfered with the ability to make any accurate determination; spike value is high. |

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

## State Accreditations

| | | | |
|---|---|---|---|
| Alabama | 40660 | Nebraska | NE-OS-15-05 |
| Alaska | 17-026 | Nevada | TN-03-2002-34 |
| Arizona | AZ0612 | New Hampshire | 2975 |
| Arkansas | 88-0469 | New Jersey–NELAP | TN002 |
| California | 2932 | New Mexico [1] | n/a |
| Colorado | TN00003 | New York | 11742 |
| Connecticut | PH-0197 | North Carolina | Env375 |
| Florida | E87487 | North Carolina [1] | DW21704 |
| Georgia | NELAP | North Carolina [3] | 41 |
| Georgia [1] | 923 | North Dakota | R-140 |
| Idaho | TN00003 | Ohio–VAP | CL0069 |
| Illinois | 200008 | Oklahoma | 9915 |
| Indiana | C-TN-01 | Oregon | TN200002 |
| Iowa | 364 | Pennsylvania | 68-02979 |
| Kansas | E-10277 | Rhode Island | LAO00356 |
| Kentucky [1 6] | 90010 | South Carolina | 84004 |
| Kentucky [2] | 16 | South Dakota | n/a |
| Louisiana | AI30792 | Tennessee [1 4] | 2006 |
| Louisiana [1] | LA180010 | Texas | T104704245-18-15 |
| Maine | TN0002 | Texas [5] | LAB0152 |
| Maryland | 324 | Utah | TN00003 |
| Massachusetts | M-TN003 | Vermont | VT2006 |
| Michigan | 9958 | Virginia | 460132 |
| Minnesota | 047-999-395 | Washington | C847 |
| Mississippi | TN00003 | West Virginia | 233 |
| Missouri | 340 | Wisconsin | 9980939910 |
| Montana | CERT0086 | Wyoming | A2LA |

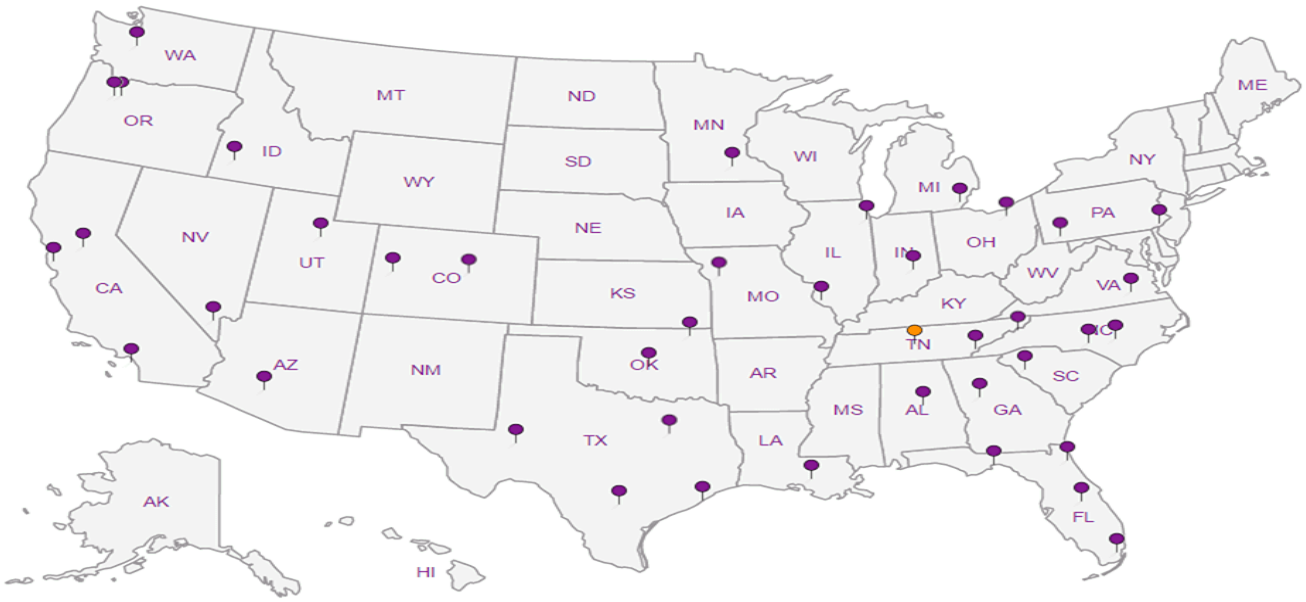
## Third Party Federal Accreditations

| | | | |
|---|---|---|---|
| A2LA – ISO 17025 | 1461.01 | AIHA-LAP,LLC EMLAP | 100789 |
| A2LA – ISO 17025 [5] | 1461.02 | DOD | 1461.01 |
| Canada | 1461.01 | USDA | P330-15-00234 |
| EPA–Crypto | TN00003 | | |

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

## Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



**Arcadis - Chevron - AK**

880 H St.
Anchorage, AK 99501

Billing Information:
Attn: Acounts Payable
630 Plaza Dr Ste 600
Highlands Ranch, CO 80129

Report to: Nicole Monroe

Email To: Nicole.Monroe@arcadis.com;environmentDM-

Project Description: 91252

City/State Collected: Anchorage, Alaska

Please Circle: PT MT CT ET AKST

Phone: 907-276-8095
Fax:

Client Project # 30043248.5133

Lab Project # CHEVARCAK-91252

Collected by (print): EM

Site/Facility ID # 91252

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

*Rush?* (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day ✓ Standard

Quote #

Date Results Needed

Analysis / Container / Preservative

| Sample ID | Comp/Grab | Matrix * | Depth | Date | Time | No. of Cntrs | AK102 100ml Amb HCl | EDB/123TCP V524LL 40mlAmb-HCl | VOCs 8260D 40mlAmb-HCl | Remarks | Sample # (lab only) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EQ3-1-W-200401 | G | GW | — | 4.01.20 | 1200 | 8 | ✓ | ✓ | ✓ | | -01 |
| MW-3-W-MS/MSD-200401 | G | GW | — | 4.01.20 | 1300 | 8 | ✓ | ✓ | ✓ | | -02 |
| MW-3-W-200401 | G | GW | — | 4.01.20 | 1400 | 8 | ✓ | ✓ | ✓ | | -02 |
| Trip Blank | — | GW | — | — | — | | | ✓ | ✓ | | -03 |
| | | GW | | | | | | | | | |
| | | GW | | | | | | | | | |
| | | GW | | | | | | | | | |
| | | GW | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

SDG # L1205746

B238

Acctnum:

Template: T164365

Prelogin: P763052

PM: 110 - Brian Ford

PB:

Shipped Via: FedEx 2nd Day

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking # 167623837143

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Trip Blank Received: Yes / No HCL / MeoH TBR | If preservation required by Login: Date/Time |
|---|---|---|---|---|---|
| [signature] | 4.02.20 | 1100 | | ✓ | |
| Relinquished by : (Signature) | Date: | Time: | Received by: (Signature) | Temp: 4.6 °C .6-1=.5 Bottles Received: 24 | |
| Relinquished by : (Signature) | Date: | Time: | Received for lab by: (Signature) | Date: 4.2.20 Time: 0830 | Hold: / Condition: NCF / OK |

# APPENDIX D

## ADEC Data Review Checklist

# Laboratory Data Review Checklist

Completed By:

Suresh PR

Title:

Project Chemist

Date:

April 24,2020

Consultant Firm:

ARCADIS U.S., Inc

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1205746

Laboratory Report Date:

04/16/2020

CS Site Name:

First semiannual 2020 Groundwater Monitoring Report

ADEC File Number:

2107.26.003

Hazard Identification Number:

23705

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

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

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

   Yes☐ No☒ N/A☐ Comments:

| |
|---|
| No. |

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

3. Laboratory Sample Receipt Documentation

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

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

   Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

   Yes☐ No☒ N/A☐ Comments:

| |
|---|
| No. |

e. Data quality or usability affected?

Comments:

| |
|---|
| Data quality/usability was not affected. |

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

Comments:

| |
|---|
| Data quality/usability was not affected. |

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

c. All soils reported on a dry weight basis?

Yes☐ No☒ N/A☐ Comments:

| |
|---|
| No soil samples were submitted for analysis. |

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

e. Data quality or usability affected?

| |
|---|
| Data quality/usability was not affected. |

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

| |
|---|
| None of the samples were affected. |

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

Yes☐ No☒ N/A☐ Comments:

| |
|---|
| No. |

v. Data quality or usability affected?

Comments:

| |
|---|
| Data quality/usability was not affected. |

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

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

Yes☐ No☒ N/A☐ Comments:

| |
|---|
| Metals/Inorganic analysis was not requested for submitted samples. |

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

LCS/LCSD recoveries for compound acrolein was greater than control limit and 1,4-dichlorobenzene was less than the control limit in preparation batch WG1456237 for method SW846 8260D. The compound 1,4-dichlorobenzene result in associated sample was non-detect and qualified as estimated (UJ). Acrolein result in associated sample was non-detect; hence qualification was not required.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples were affected.

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

Yes☒ No☐ N/A☐ Comments:

1,4-Dichlorobenzene result in sample MW-3-W-200401 qualified as estimated (UJ).

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

The LCS/LCSD recovery exceedance considered as minor and would result in the estimation of the associated data. The reported data should still consider as usable.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

The MS/MSD analysis was performed on sample MW-3-W_200401.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☐ No☒ N/A☐ Comments:

No.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

Method SW846 8260D: The MS and/or MSD recoveries were greater than the control limit for compounds acrolein, bromodichloromethane, carbon tetrachloride, methyl tert-butyl ether, tetrachloroethene, 1,1,1-trichloroethane and 1,2,3-trichloropropane in sample MW-3-W_200401. These compound result in associated samples were non-detect; hence, qualification was not required.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Comments:

None of the samples were affected.

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

Yes☐ No☒ N/A☐ Comments:

No.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality/usability was not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

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

Yes☒ No☐ N/A☐ Comments:

Yes.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

Yes.

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

Yes☐ No☒ N/A☐ Comments:

No.

iv. Data quality or usability affected?

Comments:

| |
|---|
| Data quality/usability was not affected. |

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Trip blank sample was collected as TRIP BLANK_200401. |

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

iii. All results less than LOQ and project specified objectives?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

| |
|---|
| None of the samples were affected. |

v. Data quality or usability affected?

Comments:

| |
|---|
| Data quality/usability was not affected. |

f. Field Duplicate

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

Yes☐ No☒ N/A☐ Comments:

| |
|---|
| No. |

ii. Submitted blind to lab?

Yes☐ No☐ N/A☒ Comments:

| |
|---|
| Not Applicable. |

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

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where $R_1$ = Sample Concentration
$R_2$ = Field Duplicate Concentration

Yes☐ No☐ N/A☒ Comments:

| |
|---|
| Not Applicable. |

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)
Comments:

| |
|---|
| Data quality/usability was not affected. |

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

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Equipment blank sample was collected as EQB-1-W_200401. |

i. All results less than LOQ and project specified objectives?

Yes☐ No☒ N/A☐ Comments:

| |
|---|
| SW846 8260D: Compounds bromodichloromethane, bromoform, chlorodibromomethane, chloroform and p-isopropyltoluene were detected below and/or above the reporting limit in EQB-1-W_200401. A blank action level was established at five times of the reported blank concentration.<br>Compounds results in associated sample were non-detect; hence, qualification was not required.<br><br>AK102: Compound AK102 DRO C10-C25 was detected above the reporting limit in EQB-1-W_200401. A blank action level was established at five times of the reported blank concentration.<br>Compound result in associated sample was non-detect; hence, qualification was not required. |

ii. If above LOQ or project specified objectives, what samples are affected?
Comments:

| |
|---|
| None of the samples were affected. |

iii. Data quality or usability affected?
Comments:

| |
|---|
| Data quality/usability was not affected. |

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

a. Defined and appropriate?

Yes☒ No☐ N/A☐ Comments:

| |
|---|
| Yes. |