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## ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ARRC	Alaska Railroad Corporation
CCIC	Cleanup Complete with Institutional Controls
DCB	Dichlorobenzene
DQOs	Data Quality Objectives
EPA	Environmental Protection Agency
HVO	Halogenated Volatile Organic
IDW	Investigation-Derived Waste
L/min	Liters per minute
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicates
LDRC	Laboratory Data Review Checklist
LRA	Limited Removal Action
µg/L	Micrograms per liter
mV	Millivolts
NTU	Nephelometric Turbidity Unit
ORP	Oxidation Reduction Potential
RPD	Relative Percent Difference
SGS	SGS North America Inc.
Site	250 Post Road, Anchorage, Alaska
TCB	Trichlorobenzene
TCE	Trichloroethylene
TTD	Contaminated Media Transport, Treatment, & Disposal
US Ecology	US Ecology Alaska, LLC
VOCs	Volatile Organic Compounds

**JUNE 2021 GROUNDWATER MONITORING EVENT**  
**250 POST ROAD**  
**ANCHORAGE, ALASKA**  
**FILE NUMBER 2100.38.036**

**1.0 INTRODUCTION**

This report presents the results of Shannon & Wilson's June 2021 groundwater monitoring event for the parcel at 250 Post Road (also referenced as 250 North Post Road), Anchorage, Alaska (Site). The Alaska Department of Environmental Conservation's (ADEC) File Number is 2100.38.036. Written authorization to proceed with this project was received from Ms. Mary Logue of Kelly-Moore Paint Co., Inc. on June 4, 2021 in the form of a signed proposal.

**2.0 SITE AND PROJECT DESCRIPTION**

**2.1 Site Location and Description**

The project site is located at 250 Post Road, in the Northwest  $\frac{1}{4}$  of the Northwest  $\frac{1}{4}$  of Section 17, Township 13 North, Range 3 West, Seward Meridian, Alaska, according to the United States Geological Survey Anchorage A-8 quadrangle. The legal description of the Site is Alaska Railroad Reserve Lot 46A, Anchorage, Alaska. The Site is located north of Ship Creek, as shown in Figure 1. A site plan of the subject site is included as Figure 2.

The Site is owned by the Alaska Railroad Corporation (ARRC) and has been leased and sub-leased by multiple interests since the early 1970s. Tenants have included Northern Supply Incorporated, Westinghouse Electric Corporation, Swalling Construction Company, Inc., and Silver Mountain Construction.

**2.2 Background**

Previous investigations conducted by Shannon & Wilson indicated halogenated volatile organic (HVO)-impacted soil and groundwater were located southwest of the on-site warehouse. The primary HVO constituent of interest was trichloroethylene (TCE), although other chlorinated volatile compounds have been measured in soil and groundwater samples. A summary of the previous assessment and cleanup activities relevant to the TCE-impacted area is presented in the *2018 Additional Site Characterization* report dated November 2018.

The TCE concentrations in soil have decreased by an order of magnitude since the 2003 limited removal action (LRA). However, the results of additional site characterization activities conducted in 2018 indicated TCE concentrations in the subsurface soil continue to exceed the most stringent ADEC Method Two migration to groundwater cleanup level. Based on June and October 2019 groundwater monitoring event results, concentrations of TCE and two other volatile organic compounds (VOCs), 1,2,4-trichlorobenzene (TCB) and 1,4-dichlorobenzene (DCB), also continue to exceed the ADEC Table C cleanup levels in groundwater samples, but only in the immediate vicinity of the 2003 LRA.

In their December 16, 2019 letter, the ADEC indicated further evaluation was necessary to verify contaminant concentrations at the Site are stable or decreasing. Additional groundwater monitoring events were scheduled for the June and October 2020. Results of the June and October 2020 groundwater monitoring events indicated concentrations of TCE, 1,2,4-TCB, and 1,4-DCB continue to exceed the ADEC Table C cleanup levels. A qualitative review of the historical data suggested the concentrations of TCE, 1,2,4-TCB, and 1,4-DCB appear to be stable or decreasing. Mann-Kendall test results indicate either a statistically decreasing or no trend for TCE, 1,2,4-TCB, and 1,4-DCB except for 1,2,4-TCB in Well MW-6 which exhibits a statistically increasing trend since implementation of low-flow sampling.

In their May 26, 2021 letter, the ADEC indicated the Site is not eligible for closure and recommended continuing annual groundwater monitoring to demonstrate decreasing contaminant concentrations of VOCs at Wells MW-4 and MW-6.

### **2.3 Project Purpose and Objectives**

The project purpose is to progress towards a Cleanup Complete with Institutional Controls (CCIC) designation from the ADEC. The objective of this June 2021 groundwater monitoring event is to monitor TCE concentration trends in the groundwater at the site. Specific tasks of the June 2021 groundwater monitoring event include:

1. Collect groundwater samples from Wells MW-4 and MW-6 and analyze for VOCs.
2. Manage investigative-derived waste (IDW).

### **3.0 FIELD ACTIVITIES**

The field activities were conducted in material accordance with our February 20, 2019 work plan, approved by the ADEC in an email dated February 20, 2019. The approval for the June 2021 groundwater sampling event was provided by ADEC in an email dated June 7, 2021.

Field work was conducted by an ADEC-qualified environmental professional, as defined by 18 Alaska Administrative Code (AAC) 75.333. Analytical testing of the project samples was conducted by SGS North America Inc. (SGS) of Anchorage, Alaska. US Ecology Alaska, LLC (US Ecology) of Anchorage, Alaska disposed of the IDW. SGS and US Ecology were subcontracted to Shannon & Wilson. Field notes are provided in Appendix A.

### **3.1 Site Access and Preparation**

Prior to initiating the June 2021 groundwater monitoring event, permission to access and collect groundwater samples from the on-site monitoring wells was requested. Shannon & Wilson contacted the Site leaseholder (SAN, LLC) property management company, Chambers Commercial Real Estate, to request and arrange site access. Missy Knier of Chambers Commercial Real Estate granted site access for the June 2021 groundwater monitoring event in an email dated June 18, 2021.

### 3.2 Groundwater Sampling

On June 23, 2021, analytical groundwater samples were collected from Wells MW-4 and MW-6. Sampling was initiated using a water level indicator to measure depth to water in the well casings. Low-flow purging was conducted to reduce the effects of stagnant well casing water on chemical concentrations, and to obtain a groundwater sample that was representative of the surrounding water-bearing formation. The wells were purged and sampled using a submersible pump and dedicated tubing. The submersible pump was placed within the top foot of the groundwater column. The pump rate was adjusted with a goal of limiting the sustained water drawdown to a maximum of 0.3 foot (typical pump rate of 0.3 to 0.5 liters per minute [L/min]).

During the purging process, field personnel monitored water quality parameters (pH, temperature, turbidity, oxidation reduction potential [ORP], and specific conductance), drawdown, and purge volume. Purging was considered complete when at least one well volume was removed and four of the five water quality parameters stabilized. Water quality parameters were considered stabilized when three consecutive measurements collected 3 to 5 minutes apart indicated that parameters were within the following tolerance ranges: pH within 0.1 unit, temperature within 3 percent (minimum 0.2 degree Celsius), specific conductance within 3 percent, ORP within 10 millivolts (mV), and turbidity within 10 percent or less than 10 nephelometric turbidity units (NTU). The water quality parameters stabilized in each well during purging. The final water quality parameters are listed on Table 1.

### 4.0 LABORATORY ANALYSIS

The groundwater samples were delivered to SGS using chain-of-custody procedures. The samples were tested on a standard 14-day turnaround time. Each project sample, including a field duplicate sample from Well MW-6, was analyzed for VOCs by Environmental Protection Agency (EPA) Method 8260D. A water trip blank accompanying the groundwater samples was also analyzed for VOCs by EPA Method 8260D.

### 5.0 DISCUSSION OF ANALYTICAL RESULTS

The groundwater results were compared to applicable cleanup levels listed in the Oil and Other Hazardous Substances Pollution Control Regulations, 18 AAC 75 (November 7, 2020). Groundwater criteria are based on Table C, 18 AAC 75.345. The cleanup levels and analytical results for the groundwater samples are listed in Table 2. A copy of the laboratory report for the groundwater results is in Appendix B. A summary of historical analytical results is listed in Table 3.

#### 5.1 Monitoring Well Samples

Two primary groundwater samples and one field duplicate sample were submitted for laboratory analysis. TCE was detected in the samples collected from Well MW-4 (0.834 J micrograms per liter [ $\mu\text{g/L}$ ]) and Well MW-6 (9.65  $\mu\text{g/L}$  [higher of primary/duplicate pair sample]). The TCE concentrations reported in Samples MW-6 and MW-106 (duplicate of MW-6) exceed the ADEC Table C cleanup level of 2.8  $\mu\text{g/L}$ . Each groundwater sample collected from the two monitoring

wells contained five or more other VOCs including 1,1-dichloroethane, 1,2,3-TCB, 1,2,4-TCB, 1,2-DCB, 1,3-DCB, 1,4-DCB, and/or cis-1,2-dichloroethene. Of these detected VOCs, the concentrations of 1,2,4-TCB and 1,4-DCB in Samples MW-4, MW-6, and MW-106 (duplicate of MW6) exceed ADEC Table C cleanup levels of 4.0 µg/L and 4.8 µg/L, respectively. The remaining VOCs were reported at concentrations less than the ADEC Table C cleanup levels.

Concentrations of TCE, 1,4-DCB, and 1,2,4-TCB over time are illustrated in Figures 3, 4, and 5, respectively. As shown in the figures, Wells MW-4 and MW-6 exhibit TCE, 1,2,4-TCB, and 1,4-DCB concentrations that exceed ADEC Table C cleanup levels, except for TCE concentrations in Well MW-4 which have been less than the ADEC Table C cleanup level since the June 22, 2018 sampling event. Based on a qualitative review of the graphs, the concentrations of TCE detected since implementing low flow groundwater sampling in December 2016, appear to be stable or decreasing. No visual trend is apparent for concentrations of 1,2,4-TCB and 1,4-DCB based on the graphs.

The Mann-Kendall test was used to evaluate for the presence or absence of statistically significant trends for TCE, 1,2,4-TCB, and 1,4-DCB in Wells MW-4 and MW-6. Table 4 provides a summary of the Mann-Kendall test results. The data collected since implementation of low-flow sampling in December 2016 indicate the following at a greater than 90 percent confidence level:

- TCE – decreasing trend in Wells MW-4 and MW-6
- 1,2,4-TCB – no trend in Well MW-4 and increasing trend in Well MW-6
- 1,4-DCB – no trend in Wells MW-4 and MW-6

The visually qualitative review of the time series plot and statistical Mann-Kendall test results indicate the TCE concentrations in the groundwater plume are decreasing in Wells MW-4 and MW-6 since implementation of low-flow sampling.

The chlorinated benzenes, 1,2,4-TCB and 1,4-DCB, exhibit no concentration trends based on the visual time series plot evaluation and Mann-Kendall test results except for 1,2,4-TCB in Well MW-6. Although a statistically increasing trend is demonstrated by the Mann-Kendall test since implementation of low-flow sampling, the 1,2,4-TCB concentrations in Well MW-6 are approximately one third of the initial December 2003 concentrations, as shown on Figure 5 and summarized in Table 3.

## 5.2 Quality Assurance Summary

The project laboratory implements on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQOs). Internal laboratory controls to assess data quality for this project include surrogates, method blanks, and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to assess precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a report specific note identifying the problem in the Case Narrative section of the Laboratory Analysis Report (See Appendix B).

External quality controls include field records, a groundwater duplicate sample set, and a trip blank for the groundwater samples. The water trip blank did not contain detectable concentrations of volatile analytes.

A duplicate sample set was collected to assess the sampling precision and calculate the relative percent difference (RPD). The RPD between the project sample and associated duplicate results is a measure of precision affected by matrix heterogeneity, sampling technique, and laboratory analyses. The ADEC recommends an RPD of less than 30 percent for groundwater field duplicates. The RPDs are within the ADEC recommended DQO of 30 percent for groundwater in the duplicate groundwater sample set (MW-6/MW-106).

Shannon & Wilson reviewed the SGS data deliverable and completed the ADEC's Laboratory Data Review Checklist (LDRC) for the data package, which is included in Appendix B. Quality control discrepancies and the impact to data quality/usability are described in further detail in the LDRC. In our opinion, non-conformances that would adversely impact data usability for project data objectives were not noted, and we find the project data to be complete and useable to support the project purpose and objectives.

## 6.0 INVESTIGATION DERIVED WASTE DISPOSAL

The purge water from Wells MW-4 and MW-6 was stored in one, labeled 55-gallon drum. Groundwater samples from Wells MW-4 and MW-6 had VOC concentrations greater than the ADEC Table C cleanup levels; therefore, Shannon & Wilson coordinated with US Ecology to dispose of the purge water. The ADEC Contaminated Media Transport, Treatment, & Disposal (TTD) approval was received prior to transporting the IDW off site on July 30, 2021 for processing and disposal by US Ecology. Copies of the TTD form and waste manifest are provided in Appendix C.

## 7.0 SUMMARY

The June 2021 monitoring activities at 250 Post Road consisted of collecting groundwater samples to monitor TCE concentration trends in the groundwater plume at the site. The groundwater samples from Well MW-6 (primary and duplicate) contain TCE concentrations that exceed the ADEC Table C cleanup level. The Well MW-4 groundwater sample continues to exhibit TCE concentrations less than the ADEC Table C cleanup level.

Chlorinated benzene concentrations (1,2,4-TCB and 1,4-DCB) exceed the ADEC Table C cleanup levels in the groundwater samples from Wells MW-4 and MW-6 (primary and duplicate).

A qualitative review of the historical data collected since implementing low flow groundwater sampling suggests the concentrations of TCE appear to be decreasing in the groundwater plume. No trend is qualitatively apparent for concentrations of 1,2,4-TCB and 1,4-DCB. The Mann-Kendall test results indicate either a statistically decreasing or no trend for TCE, 1,2,4-TCB and 1,4-DCB except for 1,2,4-TCB in Well MW-6. Although a statistically increasing trend is demonstrated by the Mann-Kendall test since implementation of low-flow sampling, the 1,2,4-



TCB concentrations in Well MW-6 are approximately one third of the initial December 2003 concentrations.

The next sampling event is scheduled for June 2022 and will include collecting and analyzing groundwater samples from Wells MW-4 and MW-6 for VOCs by EPA 8260D.

## 8.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our clients and their representatives in the study of this site. The findings presented within this report are based on the limited sampling and analyses that we conducted. The findings should be construed in the context of the scope of sampling and not as definite conclusions regarding the Site's groundwater conditions. The sampling and analyses performed can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes in site conditions can occur over time, due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.

Shannon & Wilson has prepared the attachments in Appendix D, "Important Information About Your Geotechnical/Environmental Report," to clarify use and limitations of our report. You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore, has not, and will not, disclose the results of this study, except with your permission or as required by law.

We appreciate the opportunity to be of service. Please contact the undersigned at (907) 433-3236 with any questions or comments concerning the contents of this report.

**SHANNON & WILSON, INC.**

LeeAnne Osgood, P.E.  
Associate

**TABLE 1  
MONITORING WELL SAMPLING LOG**

	Monitoring Well Number	
	MW-4	MW-6
<b>Water Level Measurement Data</b>		
Date Water Level Measured	6/23/21	6/23/21
Time Water Level Measured	9:09	9:15
Measured Depth to Water (ft below TOC)	13.28	13.62
Height of TOC bgs (ft)	-0.36	-0.32
Measured Depth to Water (ft bgs)	13.64	13.94
Surveyed TOC Elevation (ft)	97.70	98.07
Water Level Elevation (ft)	84.42	84.45
<b>Purging/Sampling Data</b>		
Date Sampled	6/23/21	6/23/21
Time Sampled	10:03	11:00
Measured Depth to Water (ft below TOC)	13.28	13.62
Total Depth of Well (ft below TOC)	18.59	16.34
Water Column in Well (ft)	5.31	2.72
Gallons per Foot	0.16	0.16
Water Column Volume (gallons)	0.85	0.44
Total Volume Pumped (gallons)	3.2	3.3
Sampling Method	SP	SP
Diameter of Well Casing	2-inch	2-inch
<b>Water Quality Data</b>		
Temperature (°C)	6.13	7.04
Specific Conductance (µS/cm)	489	519
pH (Standard Units)	6.00	5.56
Oxidation-Reduction Potential (mV)	9	112
Turbidity (NTU)	6.65	3.70
<b>Remarks</b>	Tan tint	Tan tint Duplicate Sample "MW-106"

## Notes:

Water quality parameters were measured with a Horiba and MicroTPW Turbidimeter instruments.

Level Loop Survey conducted by Shannon & Wilson, Inc. on June 26, 2018.

- TOC = top of casing
- °C = degrees Celsius
- ft = feet
- bgs = below ground surface
- µS/cm = microsiemens per centimeter
- mV = millivolt
- NTU = Nephelometric Turbidity Units
- SP = Submersible pump

**TABLE 2**  
**GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Parameter Tested	Units	Method*	Groundwater Cleanup Level**	Sample ID Number^ and Water Depth in Feet bgs (See Table 1, Figure 2, and Appendix B)			
				Monitoring Wells			Trip Blank
				MW-4 13.64	MW-6 13.94	MW-106~ 13.94	WTB -
Volatile Organic Compounds (VOCs)							
Tetrachloroethene	µg/L	EPA 8260D	41	<0.500	<0.500	<0.500	<0.500
Trichloroethylene	µg/L	EPA 8260D	2.8	<b>0.834 J</b>	<b>9.52</b>	<b>9.65</b>	<0.500
cis-1,2-Dichloroethene	µg/L	EPA 8260D	36	<0.500	<b>0.710 J</b>	<b>0.718 J</b>	<0.500
Vinyl Chloride	µg/L	EPA 8260D	0.19	<0.0750	<0.0750	<0.0750	<0.0750
Benzene	µg/L	EPA 8260D	4.6	<0.200	<0.200	<0.200	<0.200
Ethylbenzene	µg/L	EPA 8260D	15	<0.500	<0.500	<0.500	<0.500
Toluene	µg/L	EPA 8260D	1,100	<0.500	<0.500	<0.500	<0.500
Xylenes	µg/L	EPA 8260D	190	<1.50	<1.50	<1.50	<1.50
Chlorobenzene	µg/L	EPA 8260D	78	<0.250	<0.250	<0.250	<0.250
Chloromethane	µg/L	EPA 8260D	190	<0.500	<0.500	<0.500	<0.500
1,1,1-Trichloroethane	µg/L	EPA 8260D	8,000	<0.500	<0.500	<0.500	<0.500
1,1-Dichloroethane	µg/L	EPA 8260D	28	<b>1.25</b>	<b>0.673 J</b>	<b>0.689 J</b>	<0.500
1,2-Dichloroethane	µg/L	EPA 8260D	1.7	<0.250	<0.250	<0.250	<0.250
1,2,3-Trichlorobenzene	µg/L	EPA 8260D	7.0	<0.500	<b>0.499 J</b>	<b>0.531 J</b>	<0.500
1,2,4-Trichlorobenzene	µg/L	EPA 8260D	4.0	<b>14.2</b>	<b>7.95</b>	<b>8.35</b>	<0.500
1,2-Dichlorobenzene	µg/L	EPA 8260D	300	<b>0.656 J</b>	<b>0.648 J</b>	<b>0.687 J</b>	<0.500
1,3-Dichlorobenzene	µg/L	EPA 8260D	300	<b>6.98</b>	<b>4.77</b>	<b>5.06</b>	<0.500
1,4-Dichlorobenzene	µg/L	EPA 8260D	4.8	<b>7.10</b>	<b>4.91</b>	<b>5.17</b>	<0.250
Other VOCs	µg/L	EPA 8260D	Various	ND	ND	ND	ND

## Notes:

- \* See Appendix B for compounds tested, methods, and laboratory reporting limits
- \*\* Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (November 7, 2020)
- ^ = sample ID No. preceded by "107454-" on the chain-of-custody form
- µg/L = micrograms per liter
- 1.25** = analyte detected
- 14.2** = reported concentration exceeds the ADEC Table C cleanup level
- <0.500 = analyte not detected; laboratory limit of detection 0.500 µg/L
- bgs = below ground surface
- ~ = duplicate of preceding sample
- J = concentration is an estimate less than the limit of quantitation (LOQ). See the SGS laboratory report for details.
- ND = analyte not detected

**TABLE 3**  
**SUMMARY OF HISTORICAL GROUNDWATER DATA**

Parameter Tested	Units	Method*	Cleanup Level**	Monitoring Well Number, Date of Sample Collection, and Depth to Water in feet bgs													
				MW-1										MW-2		MW-3	
				5/7/03 5.91	8/19/03 5.73	7/29/04 6.08	10/29/04 5.70	5/19/05 6.27	12/15/16 5.96	6/22/18 5.81	11/15/18 5.80	6/11/19 6.12	10/29/19 5.93	5/7/03 13.16	8/19/03 13.20	5/8/03 13.91	8/19/03~ 13.84
Tetrachloroethene	µg/L	EPA 8021B/8260B/C/D	41	<1.00	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00
Trichloroethylene	µg/L	EPA 8021B/8260B/C/D	2.8	<1.00	<1.00	<1.00	-	<1.00	<b>0.390 J</b>	<0.500	<b>0.370 J</b>	<b>&lt;0.500</b>	<b>0.329 J</b>	<1.00	<1.00	<b>4.86</b>	<b>14.2</b>
cis-1,2-Dichloroethene	µg/L	EPA 8021B/8260B/C/D	36	<1.00	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<b>1.41</b>
Vinyl Chloride	µg/L	EPA 8021B/8260B/C/D	0.19	<b>&lt;1.00</b>	<b>&lt;1.00</b>	<b>&lt;1.00</b>	-	<b>&lt;1.00</b>	<b>&lt;0.500</b>	<0.0750	<0.0750	<0.0750	<0.0750	<b>&lt;1.00</b>	<b>&lt;1.00</b>	<b>&lt;1.00</b>	<b>&lt;1.00</b>
1,1,1-Trichloroethane	µg/L	EPA 8021B/8260B/C/D	8,000	<b>5.61</b>	<b>5.73</b>	<b>3.81</b>	-	<b>3.41</b>	<b>2.08</b>	<b>0.990 J</b>	<b>1.14</b>	<b>0.910 J</b>	<b>0.501 J</b>	<b>2.89</b>	<1.00	<1.00	<b>1.31</b>
1,1-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	28	<b>1.19</b>	<b>2.13</b>	<b>1.45</b>	-	<b>1.06</b>	<b>1.88</b>	<0.500	<b>1.91</b>	<b>1.21</b>	<b>2.08</b>	<b>2.15</b>	<b>2.52</b>	<b>2.76</b>	<b>2.94</b>
1,2-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	1.7	<1.00	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00
1,2,3-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	7.0	<1.00	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00
1,2,4-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.0	<1.00	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<b>26.4</b>	<b>18.1</b>
Dichlorodifluoromethane	µg/L	EPA 8260B/C/D	200	<1.00	-	-	-	<1.00	<b>0.630 J</b>	<0.500	<0.500	<0.500	<0.500	<1.00	-	<1.00	-
1,2-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	-	<1.00	<1.00	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	-	<1.00	-	<b>1.39</b>
1,3-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	<1.00	<1.00	<1.00	-	<1.00	<0.250	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<b>11.8</b>	<b>7.18</b>
1,4-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.8	<0.500	<0.500	<0.500	-	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.500	<b>16.7</b>	<b>8.71</b>
Benzene	µg/L	EPA 8021B/8260B/C/D	4.6	<0.400	-	-	-	-	<0.200	<0.200	<0.200	<0.200	<b>0.181 J</b>	<0.400	-	<0.400	-
Chlorobenzene	µg/L	EPA 8021B/8260B/C/D	78	<0.500	<0.500	<0.500	-	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.500	<b>1.3</b>	<0.500
Toluene	µg/L	EPA 8021B/8260B/C/D	1,100	<1.00	<1.00	-	-	-	<0.500	<0.500	<b>0.380 J</b>	<b>&lt;0.500</b>	<b>0.621 J</b>	<1.00	<1.00	<1.00	<1.00
Chloromethane	µg/L	EPA 8021B/8260B/C/D	190	<1.00	<1.00	<1.00	-	-	<0.500	<0.500	<b>0.650 J</b>	<b>&lt;0.500</b>	<b>0.327 J</b>	<1.00	<1.00	<1.00	<1.00
Naphthalene	µg/L	EPA 8021B/8260B/C/D	1.7	-	<b>&lt;2.00</b>	-	-	-	<0.500	<0.500	<0.500	<0.500	<0.500	-	<b>5.59</b>	-	<b>&lt;2.00</b>

## Notes:

- \* See Appendix B for compounds tested, methods, and laboratory reporting limits
- \*\* Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (November 7, 2020)
- µg/L = micrograms per liter
- 5.59** = reported concentration exceeds the ADEC Table C cleanup level
- 5.61** = analyte detected
- <1.00 = analyte not detected; laboratory limit of detection 1.00 µg/L
- <1.00** = Laboratory limit of detection is greater than the ADEC Table C cleanup level
- bgs = below ground surface
- = Not applicable or sample not analyzed for this parameter
- ~ = Analytical results for these samples reflect the higher concentrations for duplicate set
- J = Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.

**TABLE 3  
SUMMARY OF HISTORICAL GROUNDWATER DATA**

Parameter Tested	Units	Method*	Cleanup Level**	Monitoring Well Number, Date of Sample Collection, and Depth to Water in feet bgs																			
				MW-4											MW-5								
				5/8/03 13.53	8/19/03 13.44	7/29/04~ 13.66	5/19/05 13.32	12/15/16 13.84	6/22/18 13.25	11/15/18 13.76	6/11/19 13.38	10/29/19 14.01	6/18/20 13.49	10/7/20 13.69	6/23/21 13.64	5/8/03 6.35	8/19/03 6.09	7/29/04 6.49	12/15/16 7.11	6/22/18 6.54	11/15/18 6.50	6/11/19 6.77	10/29/19 6.59
Tetrachloroethene	µg/L	EPA 8021B/8260B/C/D	41	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
Trichloroethylene	µg/L	EPA 8021B/8260B/C/D	2.8	<b>1.23</b>	<b>1.83</b>	<b>2.51</b>	<b>3.39</b>	<b>3.15</b>	<b>2.41</b>	<b>1.70</b>	<b>1.46</b>	<b>1.26</b>	<b>1.06</b>	<b>1.48</b>	<b>0.834 J</b>	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
cis-1,2-Dichloroethene	µg/L	EPA 8021B/8260B/C/D	36	<1.00	<1.00	<1.00	<1.00	<b>0.440 J</b>	<0.500	<b>0.312 J</b>	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
Vinyl Chloride	µg/L	EPA 8021B/8260B/C/D	0.19	<1.00	<1.00	<1.00	<1.00	<0.500	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<1.00	<1.00	<1.00	<0.500	<0.0750	<0.0750	<0.0750	<0.0750
1,1,1-Trichloroethane	µg/L	EPA 8021B/8260B/C/D	8,000	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<b>1.97</b>	<b>5.1</b>	<b>3.84</b>	<b>2.82</b>	<b>1.95</b>	<b>1.72</b>	<b>1.26</b>	<b>2.66</b>	
1,1-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	28	<b>2.97</b>	<b>3.62</b>	<b>2.70</b>	<b>1.99</b>	<b>2.23</b>	<0.500	<b>1.79</b>	<b>1.36</b>	<b>1.96</b>	<b>1.38</b>	<b>1.66</b>	<b>1.25</b>	<b>1.04</b>	<b>1.59</b>	<b>1.15</b>	<b>1.19</b>	<b>5.20 J</b>	<b>0.870 J</b>	<b>0.649 J</b>	<b>0.899 J</b>
1,2-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	1.7	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<b>0.156 J</b>	<b>0.184 J</b>	<0.250	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
1,2,3-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	7.0	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
1,2,4-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.0	<b>42.5</b>	<b>44.8</b>	<b>33.9</b>	<b>13.50</b>	<b>16.7</b>	<b>9.28</b>	<b>6.95</b>	<b>9.83</b>	<b>4.58</b>	<b>15.9</b>	<b>8.43</b>	<b>14.2</b>	<1.00	<1.00	<1.00	<b>0.540 J</b>	<0.500	<0.500	<0.500	<0.500
Dichlorodifluoromethane	µg/L	EPA 8260B/C/D	200	<1.00	-	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	-	-	<b>0.670 J</b>	<0.500	<0.500	<0.500	<b>0.325 J</b>
1,2-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	-	<b>4.08</b>	<b>2.54</b>	<b>1.61</b>	<b>1.57</b>	<0.500	<0.500	<0.500	<0.500	<b>0.937 J</b>	<b>0.440 J</b>	<b>0.656 J</b>	-	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
1,3-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	<b>20.7</b>	<b>19.1</b>	<b>13.5</b>	<b>8.09</b>	<b>13.9</b>	<b>7.60</b>	<b>4.12</b>	<b>7.28</b>	<b>2.20</b>	<b>9.87</b>	<b>4.50</b>	<b>6.98</b>	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500
1,4-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.8	<b>31.2</b>	<b>28.5</b>	<b>18.3</b>	<b>11.2</b>	<b>19.6</b>	<b>9.40</b>	<b>4.95</b>	<b>8.14</b>	<b>2.54</b>	<b>10.9</b>	<b>4.70</b>	<b>7.10</b>	<0.500	<b>&lt;5.00</b>	<b>&lt;5.00</b>	<b>0.170 J</b>	<0.250	<0.250	<0.250	<0.250
Benzene	µg/L	EPA 8021B/8260B/C/D	4.6	<0.400	-	-	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	-	-	<0.200	<0.200	<0.200	<0.200	<b>0.161 J</b>
Chlorobenzene	µg/L	EPA 8021B/8260B/C/D	78	2.30	1.88	<b>1.12</b>	<b>0.86</b>	<b>0.67</b>	<0.250	<b>0.208 J</b>	<0.250	<0.250	<b>0.229 J</b>	<0.250	<0.250	<0.500	<0.500	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250
Toluene	µg/L	EPA 8021B/8260B/C/D	1,100	<1.00	<1.00	-	-	<0.500	<0.500	<0.500	<0.500	<b>0.467 J</b>	<0.500	<0.500	<0.500	<b>7.60</b>	<b>1.77</b>	-	<0.500	<0.500	<0.500	<0.500	<b>0.666 J</b>
Chloromethane	µg/L	EPA 8021B/8260B/C/D	190	<b>1.48</b>	<1.00	<1.00	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<1.00	<b>6.07</b>	<0.500	<0.500	<0.500	<0.500	<b>0.411 J</b>	
Naphthalene	µg/L	EPA 8021B/8260B/C/D	1.7	-	<b>&lt;2.00</b>	-	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	-	<b>&lt;2.00</b>	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

Notes:

- \* See Appendix B for compounds tested, methods, and laboratory reporting limits
- \*\* Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (November 7, 2020)
- µg/L = micrograms per liter
- 42.5** = reported concentration exceeds the ADEC Table C cleanup level
- 1.23** = analyte detected
- <1.00 = analyte not detected; laboratory limit of detection 1.00 µg/L
- <1.00** = Laboratory limit of detection is greater than the ADEC Table C cleanup level
- bgs = below ground surface
- = Not applicable or sample not analyzed for this parameter
- ~ = Analytical results for these samples reflect the higher concentrations for duplicate set
- J = Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.

**TABLE 3  
SUMMARY OF HISTORICAL GROUNDWATER DATA**

Parameter Tested	Units	Method*	Cleanup Level**	Monitoring Well Number, Date of Sample Collection, and Depth to Water in feet bgs																								
				MW-6												MW-7	MW-8				MW-9							
				12/12/03 13.90	7/29/04 13.87	10/29/04 13.82	5/19/05 13.52	12/15/16~ 14.00	6/22/18~ 13.55	11/15/18~ 14.07	6/11/19~ 13.70	10/29/19~ 14.35	6/18/20~ 13.78	10/7/20~ 14.03	6/23/21~ 13.94	12/12/03 13.93	6/22/18 1.15	11/15/18 1.56	6/11/19 1.26	10/29/19 1.85	6/22/18 14.61	11/15/18 15.20	6/11/19 14.67	10/29/19 15.44				
Tetrachloroethene	µg/L	EPA 8021B/8260B/C/D	41	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Trichloroethylene	µg/L	EPA 8021B/8260B/C/D	2.8	<b>6.31</b>	<b>10.6</b>	<b>13.9</b>	<b>16.9</b>	<b>18.3</b>	<b>18.7</b>	<b>21.7</b>	<b>11.3</b>	<b>13.9</b>	<b>12.4</b>	<b>12.8</b>	<b>9.65</b>	<b>1.29</b>	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
cis-1,2-Dichloroethene	µg/L	EPA 8021B/8260B/C/D	36	<b>2.64</b>	<b>1.42</b>	<b>1.72</b>	<1.00	<b>4.57</b>	<b>1.33</b>	<b>2.79</b>	<b>0.880 J</b>	<b>1.30</b>	<b>0.882 J</b>	<b>1.41</b>	<b>0.718 J</b>	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Vinyl Chloride	µg/L	EPA 8021B/8260B/C/D	0.19	<1.00	<1.00	<1.00	<1.00	<0.500	0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<1.00	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750	<0.0750
1,1,1-Trichloroethane	µg/L	EPA 8021B/8260B/C/D	8,000	<1.00	<1.00	<1.00	<1.00	<b>0.320 J</b>	<b>0.520 J</b>	<b>0.849 J</b>	<0.500	<b>0.492 J</b>	<0.500	<b>0.754 J</b>	<0.500	<1.00	<0.500	<b>0.540 J</b>	<0.500	<b>0.558 J</b>	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	
1,1-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	28	<b>2.69</b>	<b>1.90</b>	<b>1.48</b>	<1.00	<b>1.67</b>	<0.500	0.964 J	<b>0.940 J</b>	<b>1.11</b>	<b>0.815 J</b>	<b>1.18</b>	<b>0.689 J</b>	<b>3.13</b>	<0.500	<b>0.530 J</b>	<b>0.550 J</b>	<b>0.646 J</b>	<0.500	<b>2.40</b>	<b>1.66</b>	<b>2.25</b>				
1,2-Dichloroethane	µg/L	EPA 8021B/8260B/C/D	1.7	<1.00	<1.00	<1.00	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.250	<0.250	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
1,2,3-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	7.0	<b>3.66</b>	<b>3.61</b>	<b>3.42</b>	<b>1.28</b>	<b>0.800 J</b>	<b>0.320 J</b>	<b>0.408 J</b>	<b>0.500 J</b>	<b>0.659 J</b>	<b>0.448 J</b>	<b>0.722 J</b>	<b>0.531 J</b>	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
1,2,4-Trichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.0	<b>24.1</b>	<b>12.0</b>	<b>13.4</b>	<b>5.53</b>	<b>4.51</b>	<b>1.86</b>	<b>1.65</b>	<b>8.26</b>	<b>5.73</b>	<b>9.43</b>	<b>9.48</b>	<b>8.35</b>	<1.00	<b>0.530 J</b>	<0.500	<b>0.600 J</b>	<0.500	<b>3.59</b>	<b>0.730 J</b>	<b>1.32</b>	<b>0.368 J</b>				
Dichlorodifluoromethane	µg/L	EPA 8260B/C/D	200	-	-	-	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
1,2-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	<b>6.59</b>	<b>6.81</b>	<b>3.85</b>	<b>2.10</b>	<b>0.910 J</b>	<0.500	<0.500	<b>0.920 J</b>	<b>0.629 J</b>	<b>0.815 J</b>	<b>0.780 J</b>	<b>0.687 J</b>	<1.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
1,3-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	300	<b>19.7</b>	<b>13.7</b>	<b>10.1</b>	<b>5.09</b>	<b>3.84</b>	<b>1.57</b>	<b>0.988 J</b>	<b>6.68</b>	<b>3.52</b>	<b>6.42</b>	<b>5.41</b>	<b>5.06</b>	<1.00	<b>0.580 J</b>	<0.500	<b>0.400 J</b>	<0.500	<b>3.52</b>	<b>0.543 J</b>	<b>1.38</b>	<0.500				
1,4-Dichlorobenzene	µg/L	EPA 8021B/8260B/C/D	4.8	<b>37.4</b>	<b>27.3</b>	<b>19.3</b>	<b>8.83</b>	<b>5.42</b>	<b>1.79</b>	<b>0.884</b>	<b>7.90</b>	<b>4.29</b>	<b>7.24</b>	<b>6.38</b>	<b>5.17</b>	<0.500	<b>0.520</b>	<0.250	<b>0.480 J</b>	<0.250	<b>4.21</b>	<b>0.586</b>	<b>1.41</b>	<b>0.259 J</b>				
Benzene	µg/L	EPA 8021B/8260B/C/D	4.6	-	-	-	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	-	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<b>0.136 J</b>
Chlorobenzene	µg/L	EPA 8021B/8260B/C/D	78	<0.500	<b>1.49</b>	<0.500	<b>0.61</b>	<b>0.260 J</b>	<0.250	<b>0.159 J</b>	<0.250	<b>0.216 J</b>	<b>0.208 J</b>	<0.250	<0.250	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250
Toluene	µg/L	EPA 8021B/8260B/C/D	1,100	-	-	-	-	<0.500	<0.500	<0.500	<0.500	<b>0.521 J</b>	<0.500	<0.500	<0.500	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<b>0.319 J</b>	<0.500	<b>0.524 J</b>	
Chloromethane	µg/L	EPA 8021B/8260B/C/D	190	<1.00	<1.00	<1.00	-	<0.500	<0.500	<b>0.580 J</b>	<0.500	<b>0.459 J</b>	<0.500	<0.500	<0.500	<1.00	<0.500	0.800 J	<0.500	<b>0.311 J</b>	<0.500	<b>0.886 J</b>	<0.500	<b>0.432 J</b>				
Naphthalene	µg/L	EPA 8021B/8260B/C/D	1.7	-	-	-	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500

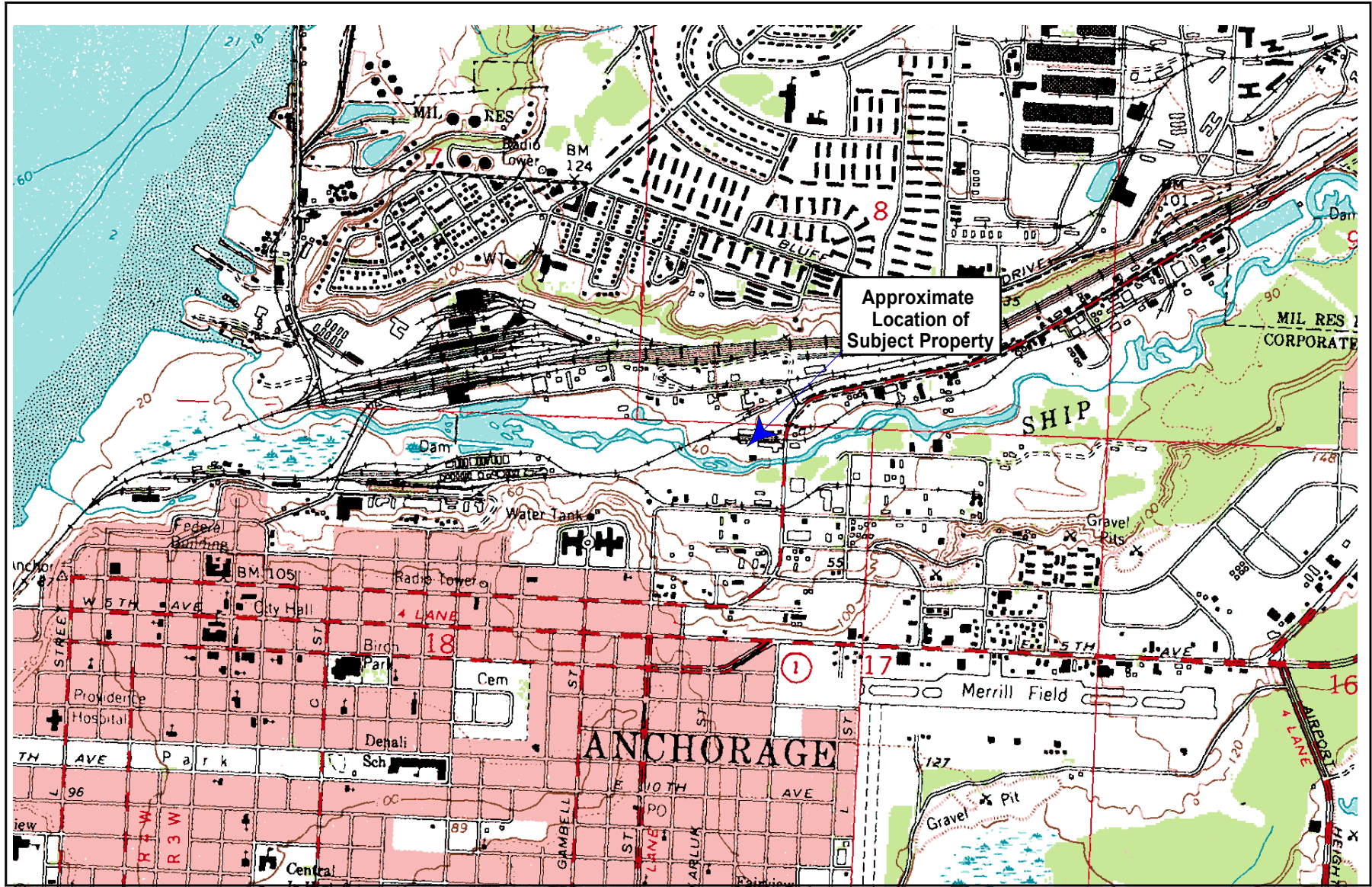
Notes:  
 \* See Appendix B for compounds tested, methods, and laboratory reporting limits  
 \*\* Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (November 7, 2020)  
 µg/L = micrograms per liter  
**6.31** = reported concentration exceeds the ADEC Table C cleanup level  
**2.64** = analyte detected  
 <1.00 = analyte not detected; laboratory limit of detection 1.00 µg/L  
 <1.00 = Laboratory limit of detection is greater than the ADEC Table C cleanup level  
 bgs = below ground surface  
 - = Not applicable or sample not analyzed for this parameter  
 ~ = Analytical results for these samples reflect the higher concentrations for duplicate set  
 J = Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.

**TABLE 4**  
**MANN-KENDALL STATISTICAL TEST RESULTS**

Event Number	Sampling Date	Monitoring Well Number and Concentration in µg/L*					
		MW-4			MW-6		
		TCE	1,2,4-TCB	1,4-DCB	TCE	1,2,4-TCB	1,4-DCB
1	15-Dec-16	3.15	16.70	19.60	18.30	4.51	5.42
2	22-Jun-18	2.41	9.28	9.40	18.70	1.86	1.79
3	15-Nov-18	1.70	6.95	4.95	21.70	1.65	0.88
4	11-Jun-19	1.46	9.83	8.14	11.30	8.26	7.90
5	29-Oct-19	1.26	4.58	2.54	13.90	5.73	4.29
6	18-Jun-20	1.06	15.90	10.90	12.40	9.43	7.24
7	7-Oct-20	1.48	8.43	4.70	12.80	9.48	6.38
8	23-Jun-21	0.834	14.2	7.10	9.65	8.35	5.17
Mann Kendall Statistic S=		-22	-2	-10	-14	16	4
Number of Rounds n=		8	8	8	8	8	8
Average =		1.67	10.73	8.42	14.84	6.16	4.88
Standard Deviation =		0.76	4.39	5.27	4.22	3.22	2.48
Coefficient of Variation (CV) =		0.46	0.41	0.63	0.28	0.52	0.51
Trend ≥ 80% Confidence Level		Decreasing	No Trend	Decreasing	Decreasing	Increasing	No Trend
Trend ≥ 90% Confidence Level		Decreasing	No Trend	NoTrend	Decreasing	Increasing	No Trend
Stability Test, if No Trend exists at 80% Confidence Level		NA	CV≤1 Stable	NA	NA	NA	CV≤1 Stable

## Notes:

\* See Table 3 and Figures 3 through 5 for historical sample results  
µg/L = micrograms per liter



Taken from the Anchorage A-8 NW United States Geological Society quadrangle.

Approximate scale 1":1,500'



250 Post Road  
Anchorage, Alaska

**VICINITY MAP**

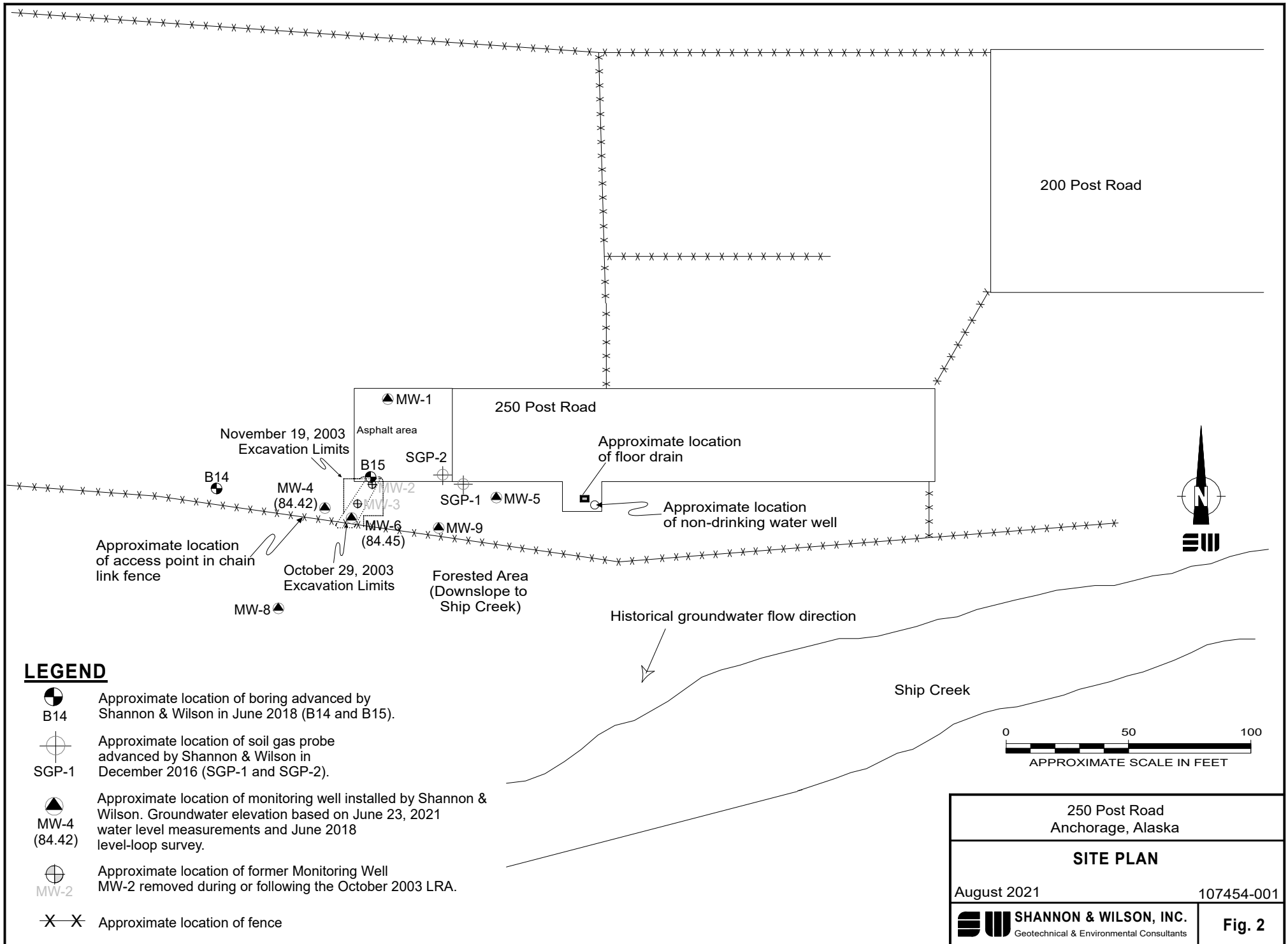
August 2021

107454-001


**SW SHANNON & WILSON, INC.**  
Geotechnical & Environmental Consultants


**Fig. 1**








**LEGEND**

- 

 B14  
 Approximate location of boring advanced by Shannon & Wilson in June 2018 (B14 and B15).
- 

 SGP-1  
 Approximate location of soil gas probe advanced by Shannon & Wilson in December 2016 (SGP-1 and SGP-2).
- 

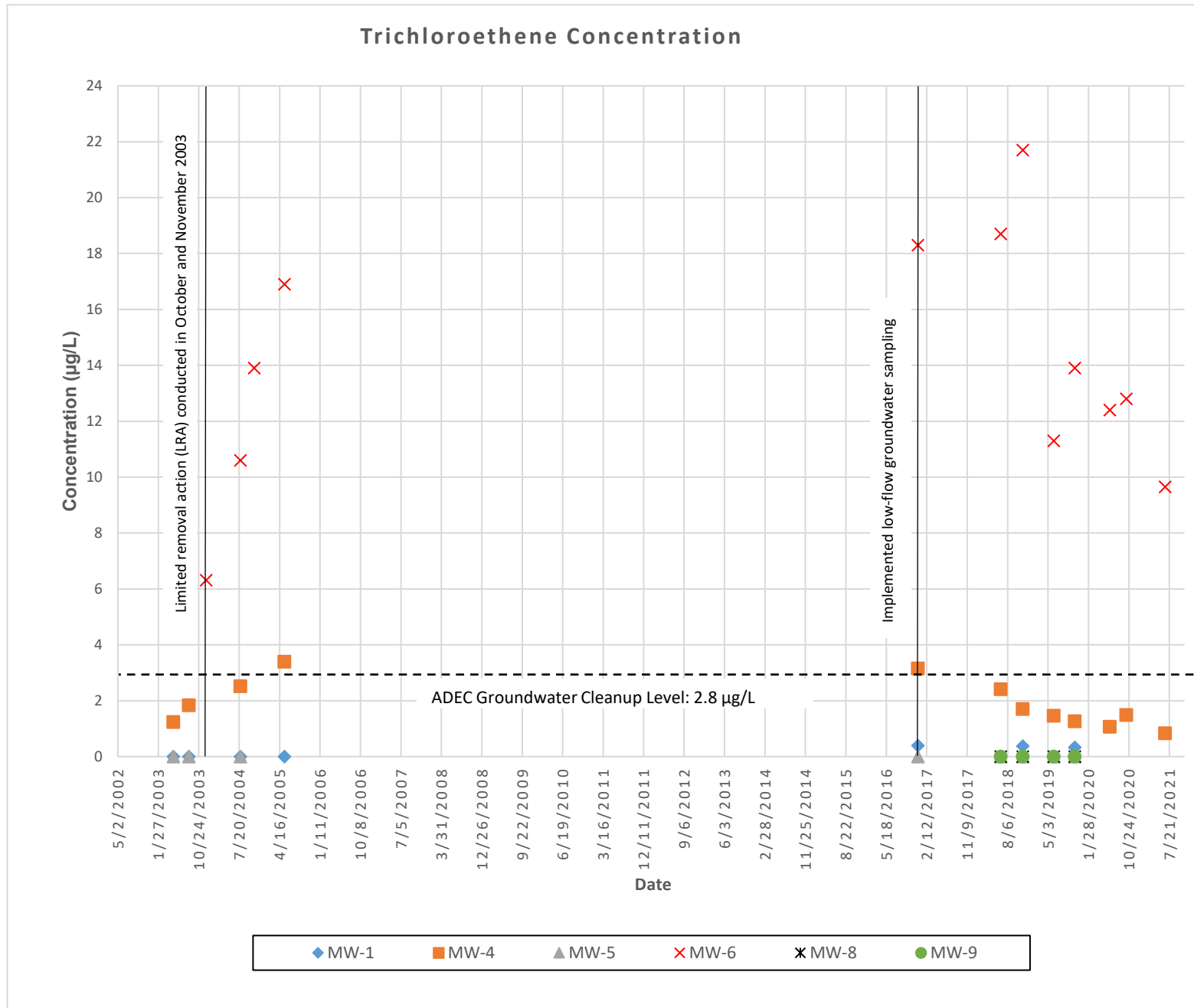
 MW-4 (84.42)  
 Approximate location of monitoring well installed by Shannon & Wilson. Groundwater elevation based on June 23, 2021 water level measurements and June 2018 level-loop survey.
- 

 MW-2  
 Approximate location of former Monitoring Well MW-2 removed during or following the October 2003 LRA.
- 

 Approximate location of fence

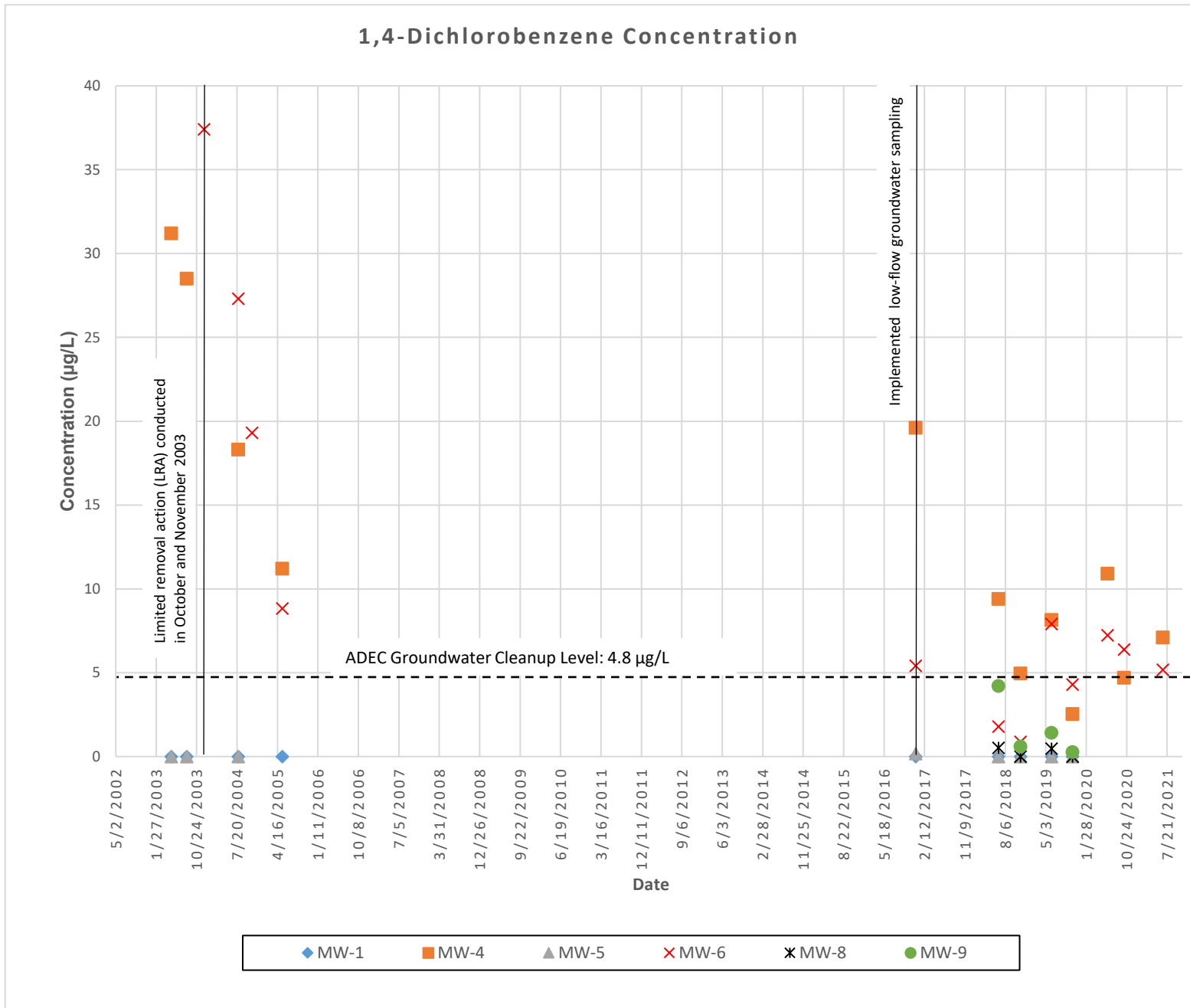
250 Post Road Anchorage, Alaska	
<b>SITE PLAN</b>	
August 2021	107454-001
 <b>SHANNON &amp; WILSON, INC.</b> Geotechnical & Environmental Consultants	<b>Fig. 2</b>

Figure 3: Trichloroethene Concentration Time Series Graph



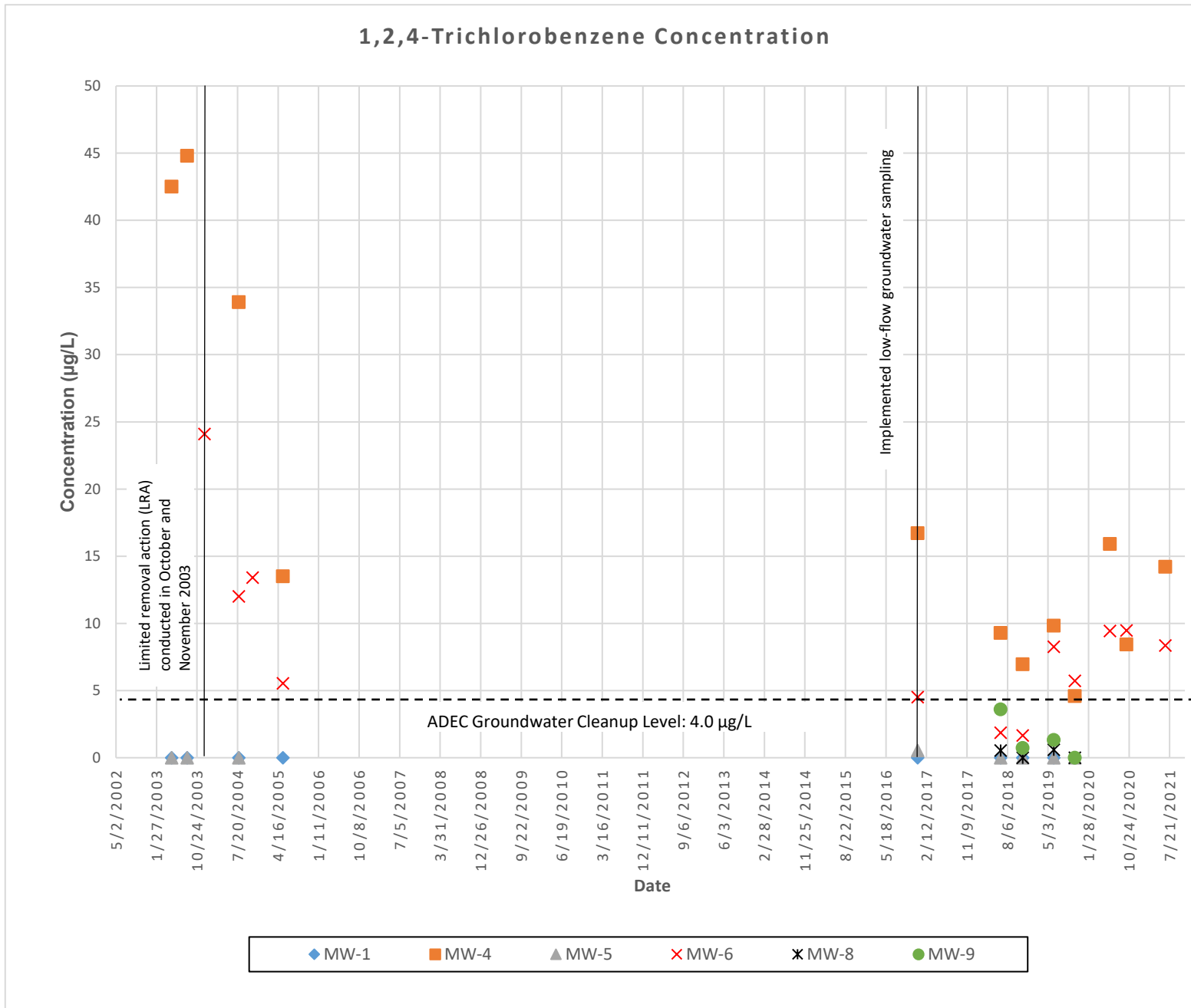
Note: Non-detects (reported at the Limit of Detection [LOD]) are plotted as zero for graphical presentation. See Table 3 for LOD.

**Figure 4: 1,4-Dichlorobenzene Concentration Time Series Graph**



Note: Non-detects (reported at the Limit of Detection [LOD]) are plotted as zero for graphical presentation. See Table 3 for LOD.

**Figure 5: 1,2,4-Trichlorobenzene Concentration Time Series Graph**



Note: Non-detects (reported at the Limit of Detection [LOD]) are plotted as zero for graphical presentation. See Table 3 for LOD.

**APPENDIX A**  
**FIELD NOTES**



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 107454 Location: 250 Post Rd. Weather: 58° Partly Cloudy  
 Well No.: MW-4  
 Date: 6.23.21 Time Started: 9:25 Time Completed: 10:12  
 Develop Date: — Develop End Time: — (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 9:09 Date of Depth Measurement: 6.23.21  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: —  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 18.59 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 13.28  
 Water Column in Well: 5.31 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.85 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 6.23.21 Time Started: 9:32 Time Completed: ~~10:05~~ 10:05  
 Three Well Volumes: 2.55 (Gallons in Well x 3)  
 Gallons Purged: 3.20 Depth of Pump (generally 2 ft from bottom): 15.0'  
 Max. Drawdown (generally 0.3 ft): 0.02 Pump Rate: 0.4 1/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
9:37	0.55	0.4	13.30	0.02	7.00	478	<del>—</del>	6.02	33	60.49
9:42	1.10	0.4	13.30	0.02	6.61	483		6.01	21	31.74
9:47	1.65	0.4	13.30	0.02	6.42	485		6.01	14	17.72
9:52	2.20	0.4	13.30	0.02	6.24	487		6.00	12	8.91
9:57	2.75	0.4	13.30	0.02	6.19	489		5.99	9	6.70
10:00	3.20	0.4	13.30	0.02	6.13	489	↓	6.00	9	6.65

## SAMPLING DATA

Odor: None Color: Tan  
 Sample Designation: 107454-MW-4 Time / Date: 10:03 6.23.21  
 QC Sample Designation: — Time / Date: —  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Single Whake  
 Sampling Method: Submersible Pump / Other: Single Whake

Water Quality Instruments Used/Manufacturer/Model Number Horiba + MicroTPW

Calibration Info (Time, Ranges, etc) 9:20 6.23.21

Remarks: —

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 107454 Location: 250 Rst Rd. Weather: 58° cloudy  
 Well No.: MW-6  
 Date: 6-23-21 Time Started: 10:15 Time Completed: 11:15  
 Develop Date: — Develop End Time: — (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 9:15 Date of Depth Measurement: 6-23-21  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: —  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 16.34 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 13.62  
 Water Column in Well: 2.72 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.44 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 6-23-21 Time Started: 10:24 Time Completed: 11:03  
 Three Well Volumes: 1.31 (Gallons in Well x 3)  
 Gallons Purged: 3.30 Depth of Pump (generally 2 ft from bottom): 15.5'  
 Max. Drawdown (generally 0.3 ft): 0.0 Pump Rate: 0.4 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO:</del> (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
10:29	0.55	0.4	13.62	0.0	7.18	512	↓	5.77	102	33.41
10:34	1.10	0.4	13.62	0.0	7.10	514	↓	5.70	110	21.39
10:39	1.65	0.4	13.62	0.0	7.22	514	↓	5.64	113	10.89
10:44	2.20	0.4	13.62	0.0	7.09	516	↓	5.63	113	8.75
10:49	2.75	0.4	13.62	0.0	7.05	517	↓	5.57	112	5.19
10:54	3.30	0.4	13.62	0.0	7.04	519	↓	5.56	112	3.70

## SAMPLING DATA

Odor: None Color: Tan  
 Sample Designation: 107454-MW-6 Time / Date: 11:00 6-23-21  
 QC Sample Designation: 107454-MW-106 Time / Date: 11:30 6-23-21  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Single whake  
 Sampling Method: Submersible Pump / Other: Single whake

Water Quality Instruments Used/Manufacturer/Model Number Horiba + Micro TPW

Calibration Info (Time, Ranges, etc) 9:20 6-23-21

Remarks: —

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

6-23-21

107454 250 N Post Rd

58° cloudy

7:30 Ane office, load gear

8:30 Depart for site; pick up client at Hotel on way

9:15 Arrive on site, calibrate equipment, open wells  
and take dtw's.

9:30 Begin MW-4 Sampling

Sample MW-4 @ 10:03

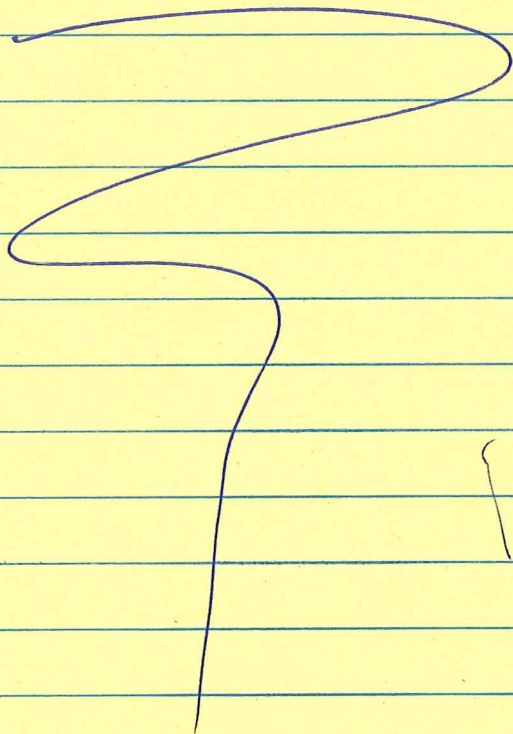
Sample MW-6 @ 11:00

Sample MW-106 @ 11:30

11:25 Sampling Complete, depart site

12:00 Ane office de-mob., re-ice samples + prep for  
delivery to SGS

13:30 Drop off samples





**APPENDIX B**  
**RESULTS OF ANALYTICAL TESTING BY SGS NORTH AMERICA INC. OF**  
**ANCHORAGE, ALASKA**  
**AND**  
**ADEC LABORATORY DATA REVIEW CHECKLIST**

## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518

Report Number: **1213581**

Client Project: **107454 250 Post Rd.**

Dear LeeAnne Osgood,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.



**Justin Nelson**  
**2021.07.08**  
**16:58:06 -08'00'**

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

## Case Narrative

SGS Client: **Shannon & Wilson, Inc.**  
SGS Project: **1213581**  
Project Name/Site: **107454 250 Post Rd.**  
Project Contact: **LeeAnne Osgood**

Refer to sample receipt form for information on sample condition.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 07/08/2021 3:14:21PM

### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/27/2021 for Mercury by EPA200.8, Nitrate as N by SM 4500NO3-F and VOCs by EPA 524.2) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
107454-MW-4	1213581001	06/23/2021	06/23/2021	Water (Surface, Eff., Ground)
107454-MW-6	1213581002	06/23/2021	06/23/2021	Water (Surface, Eff., Ground)
107454-MW-106	1213581003	06/23/2021	06/23/2021	Water (Surface, Eff., Ground)
Trip Blank	1213581004	06/23/2021	06/23/2021	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 07/08/2021 3:14:25PM

### Detectable Results Summary

Client Sample ID: **107454-MW-4**

Lab Sample ID: 1213581001

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1,1-Dichloroethane	1.25	ug/L
1,2,4-Trichlorobenzene	14.2	ug/L
1,2-Dichlorobenzene	0.656J	ug/L
1,3-Dichlorobenzene	6.98	ug/L
1,4-Dichlorobenzene	7.10	ug/L
Trichloroethene	0.834J	ug/L

Client Sample ID: **107454-MW-6**

Lab Sample ID: 1213581002

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1,1-Dichloroethane	0.673J	ug/L
1,2,3-Trichlorobenzene	0.499J	ug/L
1,2,4-Trichlorobenzene	7.95	ug/L
1,2-Dichlorobenzene	0.648J	ug/L
1,3-Dichlorobenzene	4.77	ug/L
1,4-Dichlorobenzene	4.91	ug/L
cis-1,2-Dichloroethene	0.710J	ug/L
Trichloroethene	9.52	ug/L

Client Sample ID: **107454-MW-106**

Lab Sample ID: 1213581003

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1,1-Dichloroethane	0.689J	ug/L
1,2,3-Trichlorobenzene	0.531J	ug/L
1,2,4-Trichlorobenzene	8.35	ug/L
1,2-Dichlorobenzene	0.687J	ug/L
1,3-Dichlorobenzene	5.06	ug/L
1,4-Dichlorobenzene	5.17	ug/L
cis-1,2-Dichloroethene	0.718J	ug/L
Trichloroethene	9.65	ug/L



Results of 107454-MW-4

Client Sample ID: 107454-MW-4
Client Project ID: 107454 250 Post Rd.
Lab Sample ID: 1213581001
Lab Project ID: 1213581

Collection Date: 06/23/21 10:03
Received Date: 06/23/21 12:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/08/2021 3:14:28PM

J flagging is activated



Results of 107454-MW-4

Client Sample ID: 107454-MW-4  
Client Project ID: 107454 250 Post Rd.  
Lab Sample ID: 1213581001  
Lab Project ID: 1213581

Collection Date: 06/23/21 10:03  
Received Date: 06/23/21 12:11  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Chloromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
cis-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:12
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:12
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Freon-113	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:12
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Methylene chloride	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:12
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:12
Naphthalene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
o-Xylene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		07/02/21 18:12
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Styrene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Toluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Trichloroethene	0.834 J	1.00	0.310	ug/L	1		07/02/21 18:12
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:12
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:12
Vinyl chloride	0.0750 U	0.150	0.0500	ug/L	1		07/02/21 18:12
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		07/02/21 18:12
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		07/02/21 18:12
4-Bromofluorobenzene (surr)	101	85-114		%	1		07/02/21 18:12
Toluene-d8 (surr)	103	89-112		%	1		07/02/21 18:12



## Results of 107454-MW-4

Client Sample ID: **107454-MW-4**  
Client Project ID: **107454 250 Post Rd.**  
Lab Sample ID: 1213581001  
Lab Project ID: 1213581

Collection Date: 06/23/21 10:03  
Received Date: 06/23/21 12:11  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS20882  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:12  
Container ID: 1213581001-A

Prep Batch: VXX37356  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of 107454-MW-6

Client Sample ID: 107454-MW-6
Client Project ID: 107454 250 Post Rd.
Lab Sample ID: 1213581002
Lab Project ID: 1213581

Collection Date: 06/23/21 11:00
Received Date: 06/23/21 12:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/08/2021 3:14:28PM

J flagging is activated



Results of 107454-MW-6

Client Sample ID: 107454-MW-6
Client Project ID: 107454 250 Post Rd.
Lab Sample ID: 1213581002
Lab Project ID: 1213581

Collection Date: 06/23/21 11:00
Received Date: 06/23/21 12:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

## Results of 107454-MW-6

Client Sample ID: **107454-MW-6**  
Client Project ID: **107454 250 Post Rd.**  
Lab Sample ID: 1213581002  
Lab Project ID: 1213581

Collection Date: 06/23/21 11:00  
Received Date: 06/23/21 12:11  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS20882  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:27  
Container ID: 1213581002-A

Prep Batch: VXX37356  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 107454-MW-106**

Client Sample ID: **107454-MW-106**  
 Client Project ID: **107454 250 Post Rd.**  
 Lab Sample ID: 1213581003  
 Lab Project ID: 1213581

Collection Date: 06/23/21 11:30  
 Received Date: 06/23/21 12:11  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
1,1,1-Trichloroethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,1,2,2-Tetrachloroethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
1,1,2-Trichloroethane	0.200 U	0.400	0.120	ug/L	1		07/02/21 18:42
1,1-Dichloroethane	0.689 J	1.00	0.310	ug/L	1		07/02/21 18:42
1,1-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,1-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,2,3-Trichlorobenzene	0.531 J	1.00	0.310	ug/L	1		07/02/21 18:42
1,2,3-Trichloropropane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,2,4-Trichlorobenzene	8.35	1.00	0.310	ug/L	1		07/02/21 18:42
1,2,4-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,2-Dibromo-3-chloropropane	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
1,2-Dibromoethane	0.0375 U	0.0750	0.0180	ug/L	1		07/02/21 18:42
1,2-Dichlorobenzene	0.687 J	1.00	0.310	ug/L	1		07/02/21 18:42
1,2-Dichloroethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
1,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,3,5-Trimethylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
1,3-Dichlorobenzene	5.06	1.00	0.310	ug/L	1		07/02/21 18:42
1,3-Dichloropropane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
1,4-Dichlorobenzene	5.17	0.500	0.150	ug/L	1		07/02/21 18:42
2,2-Dichloropropane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
2-Butanone (MEK)	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
2-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
2-Hexanone	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
4-Chlorotoluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
4-Isopropyltoluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
4-Methyl-2-pentanone (MIBK)	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Benzene	0.200 U	0.400	0.120	ug/L	1		07/02/21 18:42
Bromobenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Bromochloromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Bromodichloromethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
Bromoform	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Bromomethane	2.50 U	5.00	2.00	ug/L	1		07/02/21 18:42
Carbon disulfide	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Carbon tetrachloride	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Chlorobenzene	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
Chloroethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42

Print Date: 07/08/2021 3:14:28PM

J flagging is activated



**Results of 107454-MW-106**

Client Sample ID: **107454-MW-106**  
 Client Project ID: **107454 250 Post Rd.**  
 Lab Sample ID: 1213581003  
 Lab Project ID: 1213581

Collection Date: 06/23/21 11:30  
 Received Date: 06/23/21 12:11  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Chloromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
cis-1,2-Dichloroethene	0.718 J	1.00	0.310	ug/L	1		07/02/21 18:42
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 18:42
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Freon-113	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Methylene chloride	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Naphthalene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
o-Xylene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		07/02/21 18:42
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Styrene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Toluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Trichloroethene	9.65	1.00	0.310	ug/L	1		07/02/21 18:42
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 18:42
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		07/02/21 18:42
Vinyl chloride	0.0750 U	0.150	0.0500	ug/L	1		07/02/21 18:42
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		07/02/21 18:42
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	104	81-118		%	1		07/02/21 18:42
4-Bromofluorobenzene (surr)	101	85-114		%	1		07/02/21 18:42
Toluene-d8 (surr)	104	89-112		%	1		07/02/21 18:42

## Results of 107454-MW-106

Client Sample ID: **107454-MW-106**  
Client Project ID: **107454 250 Post Rd.**  
Lab Sample ID: 1213581003  
Lab Project ID: 1213581

Collection Date: 06/23/21 11:30  
Received Date: 06/23/21 12:11  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS20882  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:42  
Container ID: 1213581003-A

Prep Batch: VXX37356  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of Trip Blank

Client Sample ID: Trip Blank
Client Project ID: 107454 250 Post Rd.
Lab Sample ID: 1213581004
Lab Project ID: 1213581

Collection Date: 06/23/21 10:03
Received Date: 06/23/21 12:11
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.





**Results of Trip Blank**

Client Sample ID: **Trip Blank**  
 Client Project ID: **107454 250 Post Rd.**  
 Lab Sample ID: 1213581004  
 Lab Project ID: 1213581

Collection Date: 06/23/21 10:03  
 Received Date: 06/23/21 12:11  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Chloromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
cis-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
cis-1,3-Dichloropropene	0.250 U	0.500	0.150	ug/L	1		07/02/21 16:40
Dibromochloromethane	0.250 U	0.500	0.150	ug/L	1		07/02/21 16:40
Dibromomethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Dichlorodifluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Freon-113	5.00 U	10.0	3.10	ug/L	1		07/02/21 16:40
Hexachlorobutadiene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Isopropylbenzene (Cumene)	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Methylene chloride	5.00 U	10.0	3.10	ug/L	1		07/02/21 16:40
Methyl-t-butyl ether	5.00 U	10.0	3.10	ug/L	1		07/02/21 16:40
Naphthalene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
n-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
n-Propylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
o-Xylene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		07/02/21 16:40
sec-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Styrene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
tert-Butylbenzene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Tetrachloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Toluene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
trans-1,2-Dichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
trans-1,3-Dichloropropene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Trichloroethene	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Trichlorofluoromethane	0.500 U	1.00	0.310	ug/L	1		07/02/21 16:40
Vinyl acetate	5.00 U	10.0	3.10	ug/L	1		07/02/21 16:40
Vinyl chloride	0.0750 U	0.150	0.0500	ug/L	1		07/02/21 16:40
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		07/02/21 16:40
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	109	81-118		%	1		07/02/21 16:40
4-Bromofluorobenzene (surr)	99.1	85-114		%	1		07/02/21 16:40
Toluene-d8 (surr)	104	89-112		%	1		07/02/21 16:40

## Results of Trip Blank

Client Sample ID: **Trip Blank**  
Client Project ID: **107454 250 Post Rd.**  
Lab Sample ID: 1213581004  
Lab Project ID: 1213581

Collection Date: 06/23/21 10:03  
Received Date: 06/23/21 12:11  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS20882  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 16:40  
Container ID: 1213581004-A

Prep Batch: VXX37356  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Method Blank**

Blank ID: MB for HBN 1821801 [VXX/37356]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1620964

QC for Samples:

1213581001, 1213581002, 1213581003, 1213581004

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	2.00	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.310	ug/L

Print Date: 07/08/2021 3:14:30PM

**Method Blank**

Blank ID: MB for HBN 1821801 [VXX/37356]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1620964

QC for Samples:

1213581001, 1213581002, 1213581003, 1213581004

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	5.00U	10.0	3.10	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	0.500U	1.00	0.310	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	107	81-118		%
4-Bromofluorobenzene (surr)	99.9	85-114		%
Toluene-d8 (surr)	104	89-112		%

Print Date: 07/08/2021 3:14:30PM



**Method Blank**

Blank ID: MB for HBN 1821801 [VXX/37356]  
Blank Lab ID: 1620964

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1213581001, 1213581002, 1213581003, 1213581004

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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**Batch Information**

Analytical Batch: VMS20882  
Analytical Method: SW8260D  
Instrument: VPA 780/5975 GC/MS  
Analyst: JMG  
Analytical Date/Time: 7/2/2021 2:16:00PM

Prep Batch: VXX37356  
Prep Method: SW5030B  
Prep Date/Time: 7/2/2021 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/08/2021 3:14:30PM



**Blank Spike Summary**

Blank Spike ID: LCS for HBN 1213581 [VXX37356]  
 Blank Spike Lab ID: 1620965  
 Date Analyzed: 07/02/2021 14:31

Spike Duplicate ID: LCSD for HBN 1213581 [VXX37356]  
 Spike Duplicate Lab ID: 1620966  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213581001, 1213581002, 1213581003, 1213581004

**Results by SW8260D**

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	31.7	106	30	31.5	105	( 78-124 )	0.41	(< 20 )
1,1,1-Trichloroethane	30	28.2	94	30	27.2	91	( 74-131 )	3.70	(< 20 )
1,1,2,2-Tetrachloroethane	30	32.2	107	30	33.1	110	( 71-121 )	2.60	(< 20 )
1,1,2-Trichloroethane	30	32.0	107	30	32.2	107	( 80-119 )	0.79	(< 20 )
1,1-Dichloroethane	30	28.3	94	30	27.4	92	( 77-125 )	3.20	(< 20 )
1,1-Dichloroethene	30	28.1	94	30	26.5	89	( 71-131 )	5.70	(< 20 )
1,1-Dichloropropene	30	28.3	94	30	27.3	91	( 79-125 )	3.60	(< 20 )
1,2,3-Trichlorobenzene	30	33.1	110	30	33.6	112	( 69-129 )	1.40	(< 20 )
1,2,3-Trichloropropane	30	31.9	106	30	32.6	109	( 73-122 )	2.40	(< 20 )
1,2,4-Trichlorobenzene	30	32.8	109	30	32.7	109	( 69-130 )	0.25	(< 20 )
1,2,4-Trimethylbenzene	30	32.0	107	30	31.1	104	( 79-124 )	2.90	(< 20 )
1,2-Dibromo-3-chloropropane	30	31.1	104	30	33.1	110	( 62-128 )	6.20	(< 20 )
1,2-Dibromoethane	30	32.2	107	30	32.6	109	( 77-121 )	1.30	(< 20 )
1,2-Dichlorobenzene	30	31.6	105	30	31.3	104	( 80-119 )	0.86	(< 20 )
1,2-Dichloroethane	30	28.9	96	30	28.8	96	( 73-128 )	0.44	(< 20 )
1,2-Dichloropropane	30	29.6	99	30	29.1	97	( 78-122 )	1.70	(< 20 )
1,3,5-Trimethylbenzene	30	32.0	107	30	31.0	103	( 75-124 )	3.10	(< 20 )
1,3-Dichlorobenzene	30	31.6	105	30	31.1	104	( 80-119 )	1.40	(< 20 )
1,3-Dichloropropane	30	31.9	106	30	32.2	107	( 80-119 )	1.10	(< 20 )
1,4-Dichlorobenzene	30	31.5	105	30	31.2	104	( 79-118 )	0.91	(< 20 )
2,2-Dichloropropane	30	28.1	94	30	27.2	91	( 60-139 )	3.20	(< 20 )
2-Butanone (MEK)	90	89.2	99	90	94.6	105	( 56-143 )	5.80	(< 20 )
2-Chlorotoluene	30	31.6	105	30	30.8	103	( 79-122 )	2.50	(< 20 )
2-Hexanone	90	98.7	110	90	104	116	( 57-139 )	5.70	(< 20 )
4-Chlorotoluene	30	31.9	106	30	31.2	104	( 78-122 )	2.30	(< 20 )
4-Isopropyltoluene	30	32.1	107	30	31.1	104	( 77-127 )	3.10	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	91.3	101	90	94.8	105	( 67-130 )	3.80	(< 20 )
Benzene	30	28.6	95	30	28.0	93	( 79-120 )	2.20	(< 20 )
Bromobenzene	30	31.5	105	30	30.9	103	( 80-120 )	1.90	(< 20 )
Bromochloromethane	30	29.2	97	30	28.6	95	( 78-123 )	2.20	(< 20 )
Bromodichloromethane	30	29.9	100	30	29.4	98	( 79-125 )	1.70	(< 20 )
Bromoform	30	32.4	108	30	33.1	110	( 66-130 )	2.10	(< 20 )
Bromomethane	30	27.9	93	30	26.6	89	( 53-141 )	4.80	(< 20 )
Carbon disulfide	45	41.8	93	45	39.1	87	( 64-133 )	6.50	(< 20 )

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**Blank Spike Summary**

Blank Spike ID: LCS for HBN 1213581 [VXX37356]  
 Blank Spike Lab ID: 1620965  
 Date Analyzed: 07/02/2021 14:31

Spike Duplicate ID: LCSD for HBN 1213581 [VXX37356]  
 Spike Duplicate Lab ID: 1620966  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213581001, 1213581002, 1213581003, 1213581004

**Results by SW8260D**

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	28.2	94	30	27.1	90	( 72-136 )	4.20	(< 20 )
Chlorobenzene	30	31.0	103	30	30.6	102	( 82-118 )	1.50	(< 20 )
Chloroethane	30	29.7	99	30	27.1	90	( 60-138 )	9.40	(< 20 )
Chloroform	30	28.7	96	30	28.0	94	( 79-124 )	2.20	(< 20 )
Chloromethane	30	28.1	94	30	28.2	94	( 50-139 )	0.46	(< 20 )
cis-1,2-Dichloroethene	30	28.4	95	30	28.2	94	( 78-123 )	0.70	(< 20 )
cis-1,3-Dichloropropene	30	30.1	100	30	29.8	99	( 75-124 )	1.20	(< 20 )
Dibromochloromethane	30	31.9	106	30	32.2	107	( 74-126 )	0.94	(< 20 )
Dibromomethane	30	30.0	100	30	29.6	99	( 79-123 )	1.20	(< 20 )
Dichlorodifluoromethane	30	27.3	91	30	25.8	86	( 32-152 )	5.50	(< 20 )
Ethylbenzene	30	30.8	103	30	30.1	100	( 79-121 )	2.20	(< 20 )
Freon-113	45	43.2	96	45	40.6	90	( 70-136 )	6.00	(< 20 )
Hexachlorobutadiene	30	31.4	105	30	30.7	102	( 66-134 )	2.00	(< 20 )
Isopropylbenzene (Cumene)	30	31.3	104	30	30.5	102	( 72-131 )	2.40	(< 20 )
Methylene chloride	30	29.2	97	30	28.7	96	( 74-124 )	1.90	(< 20 )
Methyl-t-butyl ether	45	44.8	100	45	45.0	100	( 71-124 )	0.48	(< 20 )
Naphthalene	30	32.6	109	30	34.7	116	( 61-128 )	6.10	(< 20 )
n-Butylbenzene	30	32.1	107	30	31.2	104	( 75-128 )	2.80	(< 20 )
n-Propylbenzene	30	31.4	105	30	30.4	101	( 76-126 )	3.40	(< 20 )
o-Xylene	30	30.8	103	30	30.5	102	( 78-122 )	1.20	(< 20 )
P & M -Xylene	60	61.2	102	60	59.7	100	( 80-121 )	2.50	(< 20 )
sec-Butylbenzene	30	31.8	106	30	30.6	102	( 77-126 )	3.70	(< 20 )
Styrene	30	31.8	106	30	31.7	106	( 78-123 )	0.18	(< 20 )
tert-Butylbenzene	30	30.9	103	30	30.3	101	( 78-124 )	2.00	(< 20 )
Tetrachloroethene	30	30.1	100	30	29.2	97	( 74-129 )	3.00	(< 20 )
Toluene	30	29.8	99	30	29.3	98	( 80-121 )	1.90	(< 20 )
trans-1,2-Dichloroethene	30	28.2	94	30	27.0	90	( 75-124 )	4.40	(< 20 )
trans-1,3-Dichloropropene	30	33.2	111	30	33.5	112	( 73-127 )	1.10	(< 20 )
Trichloroethene	30	28.4	95	30	27.6	92	( 79-123 )	2.90	(< 20 )
Trichlorofluoromethane	30	29.1	97	30	27.2	91	( 65-141 )	6.70	(< 20 )
Vinyl acetate	30	31.1	104	30	32.4	108	( 54-146 )	4.10	(< 20 )
Vinyl chloride	30	28.0	93	30	26.3	88	( 58-137 )	6.10	(< 20 )
Xylenes (total)	90	92.0	102	90	90.2	100	( 79-121 )	2.10	(< 20 )

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## Blank Spike Summary

Blank Spike ID: LCS for HBN 1213581 [VXX37356]  
 Blank Spike Lab ID: 1620965  
 Date Analyzed: 07/02/2021 14:31

Spike Duplicate ID: LCSD for HBN 1213581 [VXX37356]  
 Spike Duplicate Lab ID: 1620966  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213581001, 1213581002, 1213581003, 1213581004

## Results by SW8260D

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		102	30		103	( 81-118 )	0.48	
4-Bromofluorobenzene (surr)	30		100	30		99	( 85-114 )	1.20	
Toluene-d8 (surr)	30		104	30		104	( 89-112 )	0.46	

## Batch Information

Analytical Batch: **VMS20882**  
 Analytical Method: **SW8260D**  
 Instrument: **VPA 780/5975 GC/MS**  
 Analyst: **JMG**

Prep Batch: **VXX37356**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **07/02/2021 06:00**  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 07/08/2021 3:14:33PM



1213581



**SHANNON & WILSON, INC.**  
Geotechnical and Environmental Consultants

**CHAIN-OF-CUS**

Page 1 of 1  
Laboratory SGS Anchorage  
Attn: Justin Nelson

400 N. 34th Street, Suite 100  
Seattle, WA 98103  
(206) 632-8020

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Fairbanks, AK 99709  
(907) 479-0600

3990 Collins Way, Suite 100  
Lake Oswego, OR 97035  
(503) 223-6147

2043 Westport Center Drive  
St. Louis, MO 63146-3564  
(314) 699-9660

5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907) 561-2120

1321 Bannock Street, Suite 200  
Denver, CO 80204  
(303) 825-3800

2705 Saint Andrews Loop, Suite A  
Pasco, WA 99301-3378  
(509) 946-6309

Analysis Parameters/Sample Container Description  
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp. Grab	Analysis Parameters/Sample Container Description					Total Number of Containers	Remarks/Matrix					
107454-MW-4	1AC	10:03	6-23-21	X	X	VOC's EPA 8260D						Groundwater				
107454-MW-6	2AC	11:00	6-23-21	X	X											"
107454-MW-106	3AC	11:30	6-23-21	X	X											"
	4AC															

Project Information	Sample Receipt
Project Number: <u>107454</u>	Total Number of Containers
Project Name: <u>250 Post Rd.</u>	COC Seals/Intact? Y/N/NA
Contact: <u>LeeAnne Osgood</u>	Received Good Cond./Cold
Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Delivery Method:
Sampler: <u>Zach Thon</u>	(attach shipping bill, if any)

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <u>[Signature]</u> Time: <u>12:11</u>	Signature: _____ Time: _____	Signature: _____ Time: _____
Printed Name: <u>Zach Thon</u> Date: <u>6-23-21</u>	Printed Name: _____ Date: _____	Printed Name: _____ Date: _____
Company: <u>Shannon &amp; Wilson</u>	Company: _____	Company: _____

Instructions
Requested Turnaround Time: <u>Standard 10 day</u>
Special Instructions: <u>STW - SGS PSA</u>

Received By: 1.	Received By: 2.	Received By: 3.
Signature: _____ Time: _____	Signature: _____ Time: _____	Signature: <u>[Signature]</u> Time: <u>12:11</u>
Printed Name: _____ Date: _____	Printed Name: _____ Date: _____	Printed Name: <u>Michelle Albanan</u> Date: <u>6/23/21</u>
Company: _____	Company: _____	Company: <u>SGS</u>

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report  
Yellow - w/shipment - for consignee files  
Pink - Shannon & Wilson - Job File

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#362285



e-Sample Receipt Form

SGS Workorder #:

1213581

1213581

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		<b>Yes</b> Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
<input type="checkbox"/> N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 0.7 °C Therm. ID: D23
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
<b>Holding Time / Documentation / Sample Condition Requirements</b>		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples match COC** (i.e., sample IDs, dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC. ***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
Were proper containers (type/mass/volume/preservative***) used?	Yes	<input type="checkbox"/> N/A ***Exemption permitted for metals (e.g.200.8/6020A).
<b>Volatile / LL-Hg Requirements</b>		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	Yes	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1213581001-A	HCL to pH < 2	OK			
1213581001-B	HCL to pH < 2	OK			
1213581001-C	HCL to pH < 2	OK			
1213581002-A	HCL to pH < 2	OK			
1213581002-B	HCL to pH < 2	OK			
1213581002-C	HCL to pH < 2	OK			
1213581003-A	HCL to pH < 2	OK			
1213581003-B	HCL to pH < 2	OK			
1213581003-C	HCL to pH < 2	OK			
1213581004-A	HCL to pH < 2	OK			
1213581004-B	HCL to pH < 2	OK			
1213581004-C	HCL to pH < 2	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

## LABORATORY DATA REVIEW CHECKLIST

**Completed by:** LeeAnne Osgood

**Title:** June 2021 Groundwater Monitoring Event, 250 Post Road, Anchorage, Alaska

**Date:** August 2021

**Consultant Firm:** Shannon & Wilson, Inc.

**Laboratory Name:** SGS North America Inc.

**Laboratory Report Number:** 1213581

**Laboratory Report Date:** July 7, 2021

**Contaminated Site Name:** Kelly-Moore Paint Store & Warehouse

**ADEC File Number:** 2100.38.036

**Hazard Identification Number:** 3168

(NOTE: *NA* = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No / NA

Comments:

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

**Yes** / No / **NA**

Comments: *The samples were not transferred to another "network" laboratory or sub-contracted to an alternate laboratory.*

### 2. Chain of Custody (COC)

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

**Yes** / No / NA

Comments:

- b. Correct analyses requested? **Yes** / No / NA

Comments:

### 3. Laboratory Sample Receipt Documentation

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

**Yes** / No / NA

Comments: *The cooler temperature blank was 0.7° Celsius.*

- b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes** / No / NA

Comments:

- c. Sample condition documented - broken, leaking (MeOH), zero headspace (VOC vials)? **Yes** / No / NA

Comments:

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.? **Yes** / **No** / NA

Comments: *No discrepancies were noted.*

- e. Data quality or usability affected?

Comments: *See above.*

#### 4. Case Narrative

- a. Present and understandable? **Yes** / No / NA

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? **Yes** / No / **NA**

Comments: *No discrepancies, error, or QC failures were noted by the laboratory in the case narrative.*

- c. Were all corrective actions documented? **Yes** / No / **NA**

Comments:

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

Comments: *The case narrative does not discuss quality/usability.*

#### 5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No / NA

Comments:

- b. All applicable holding times met? **Yes** / No / NA

Comments:

- c. All soils reported on a dry weight basis? **Yes** / No / **NA**

Comments: *Soil samples were not submitted as part of this work order.*

- d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / **No** / NA

Comments: *The LOQ for 1,2,3-trichloropropane is greater than its respective ADEC Table C cleanup level.*

e. Data quality or usability affected?

Comments: *The data cannot be used to determine whether or not a concentration of 1,2,3-trichloropropane is present at a concentration greater than its respective ADEC cleanup level, but less than the LOQ.*

**6. QC Samples**

**a. Method Blank**

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

**Yes** / No / NA

Comments:

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

**Yes** / No / NA

Comments:

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

Comments:

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

Yes / No / **NA**

Comments:

v. Data quality or usability affected?

Comments: *No, see above.*

**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 / NA

Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? Yes / No / **NA**

Comments: *Only organic analyses were requested with this work order.*

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes** / No / NA

Comments:

- iv. Precision – All relative percent differences (RPDs) 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 / NA

Comments:

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

Comments:

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

**Yes** / No / **NA**

Comments:

- vii. Data quality or usability affected?

Comments: *No, see above.*

**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 / **NA**

Comments:

- ii. Metals/Inorganics - One MS and one MSD reported per matrix, analysis and 20 samples? **Yes** / No / **NA**

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. **Yes** / No / **NA**

Comments:

- iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from MS/MSD, and/or sample/sample duplicate. **Yes** / No / **NA**

Comments:

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

Comments:

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

**Yes** / No / **NA**

Comments:

- vii. Data quality or usability affected?

Comments: *No, see above.*

**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 / NA

Comments:

- 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 / NA

Comments:

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined? Yes / No / **NA**

Comments:

- iv. Data quality or usability affected?

Comments: *See above.*

**e. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)**

- i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.) **Yes** / No / NA

Comments:

- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? (If not, a comment explaining why must be entered below.) Yes / **No** / NA

Comments: *Only one cooler was used to transport the samples.*

- iii. All results less than LOQ and project specified objectives? **Yes** / No / NA

Comments:

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

Comments:

- v. Data quality or usability affected?

Comments: *See above.*

**f. Field Duplicate**

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

**Yes** / No / NA

Comments: *Sample 107454-MW-106 is a field duplicate of Sample 107454-MW-6.*

- ii. Were the field duplicates submitted blind to the lab? **Yes** / No / NA



Comments:

- iii. Precision – All relative percent differences (RPDs) less than specified project objectives? (Recommended: 30% for water, 50% for soil) **Yes** / No / NA

Comments:

- iv. Data quality or usability affected?

Comments: *See above.*

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

**Yes** / **No** / NA

Comments: *A decontamination or equipment blank was not included in our ADEC-approved work plan.*

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

**Yes** / No / **NA**

Comments:

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

Comments:

- iii. Data quality or usability affected?

Comments:

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

- a. Defined and appropriate? **Yes** / No / NA

Comments: *A key is provided on Page 3 of the SGS Laboratory Report.*

**APPENDIX C**  
**IDW DOCUMENTATION**



**ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites and Prevention Preparedness and Response Programs**

**Contaminated Media Transport and Treatment or Disposal Approval Form**

<b>DEC HAZARD/SPILL ID #</b>		<b>NAME OF CONTAMINATED SITE OR SPILL</b>	
3168		Kelly-Moore Paint Store & Warehouse	
<b>CONTAMINATED SITE OR SPILL LOCATION – ADDRESS OR OTHER APPROPRIATE DESCRIPTION</b>			
250 Post Road; South of Railroad Tracks			
<b>CURRENT PHYSICAL LOCATION OF MEDIA</b>		<b>SOURCE OF THE CONTAMINATION (DAY TANK, WASH BAY, FIRE TRAINING PIT, LUST, ETC.)</b>	
250 Post Road		Historical Impacted Soil and Groundwater	
<b>CONTAMINANTS OF CONCERN</b>		<b>ESTIMATED VOLUME</b>	<b>DATE(S) GENERATED</b>
VOCs		~10 gallons in one 55-gal drum	6/23/2021
<b>POST TREATMENT ANALYSIS REQUIRED</b> (such as GRO, DRO, RRO, VOCs, metals, PFAS, and/or Chlorinated Solvents)			
<b>COMMENTS OR OTHER IMPORTANT INFORMATION</b>			
Impacted purge and decontamination water generated from Wells MW4 and MW6 during the June 2021 groundwater sampling event. Purge water generated will be transported to NRC Alaska Anchorage facility, then manifested to US Ecology Company, an EPA approved subtitle C landfill located in Grandview, ID for final disposal. June 2021 groundwater monitoring sampling event analytical results used to characterize purge water for disposal.			

<b>TREATMENT FACILITY, LANDFILL, AND/OR FINAL DESTINATION OF MEDIA</b>	<b>PHYSICAL ADDRESS/PHONE NUMBER</b>
US Ecology	2020 Viking Drive, Anchorage, AK/Grandview, ID (907) 646-5050
<b>RESPONSIBLE PARTY</b>	<b>ADDRESS/PHONE NUMBER</b>
Kelly-Moore Paint Co., Inc.	301 West Hurst Drive
<b>WASTE MANAGEMENT CO. / ORGANIZER</b>	<b>ADDRESS/PHONE NUMBER</b>
Mary Logue	817-799-3157

\*Note, disposal of polluted soil in a landfill requires prior approval from the landfill operator and ADEC Solid Waste Program.

**LeeAnne Osgood**

Name of the Person Requesting Approval (printed)

Signature

Digitally signed by LeeAnne Osgood,  
PE  
Date: 2021.07.20 11:35:46 -08'00'

**Associate / Shannon & Wilson, Inc.**

Title/Association

**(907)433-3236**

Date

Phone Number

**-----DEC USE ONLY-----**

Based on the information provided, ADEC approves transport of the above mentioned material. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight receipts of the loads transported and a post treatment analytical report, if disposed of at an approved treatment facility. The contaminated soil shall be transported as a covered load in compliance with 18 AAC 60.015.

**Brandi Tolsma**

DEC Project Manager Name (printed)

Signature

Digitally signed by Brandi Tolsma  
Date: 2021.07.22 10:45:22 -08'00'

**Environmental Program Specialist**

Project Manager Title

**(907)465-5378**

Date

Phone Number

# NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>VSQG</b>	Manifest Document No. <b>168716A</b>	2. Page 1 of <b>2</b>
3. Generator's Name and Mailing Address <b>KELLY-MOORE PAINT STORE &amp; WAREHOUSE 250 POST ROAD ANCHORAGE, AK 99501</b>		KELLY-MOORE PAINT STORE & WAREHOUSE 250 POST ROAD ANCHORAGE, AK 99501		
4. Generator's Phone ( )				
5. Transporter 1 Company Name <b>US ECOLOGY ALASKA LLC</b>	6. US EPA ID Number <b>AKR000004184</b>	A. State Transporter's ID <b>907-258-1558</b>		
		B. Transporter 1 Phone		
7. Transporter 2 Company Name <b>WEAVER BROTHERS</b>	8. US EPA ID Number <b>AKD002848372</b>	C. State Transporter's ID <b>907-278-4526</b>		
		D. Transporter 2 Phone		
9. Designated Facility Name and Site Address <b>US ECOLOGY IDAHO, INC. 20400 LEMLEY RD GRAND VIEW, ID 83624</b>		10. US EPA ID Number <b>IDD073114654</b>	E. State Facility's ID	
		F. Facility's Phone <b>(208) 834-2275</b>		
11. WASTE DESCRIPTION		Containers		13. Total Quantity
		No.	Type	14. Unit Wt./Vol.
a. <b>Material Not Regulated by DOT</b>		1	DM	100
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above <b>) 52142-0 IDW WATER</b>		H. Handling Codes for Wastes Listed Above <b>D37415</b>		
15. Special Handling Instructions and Additional Information  Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation				
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.				
Printed/Typed Name <b>Zach T.</b>		Signature <i>[Signature]</i>		Date Month Day Year <b>7   30   21</b>
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name <b>Cody Schell</b>		Signature <i>[Signature]</i>		Date Month Day Year <b>7   30   21</b>
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name		Signature		Date Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.				
Printed/Typed Name		Signature		Date Month Day Year

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

**APPENDIX D**  
**IMPORTANT INFORMATION ABOUT YOUR**  
**GEOTECHNICAL/ENVIRONMENTAL REPORT**



Date: August 2021  
To: Kelly-Moore Paint Co., Inc.

## **IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT**

### **CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.**

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

### **THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.**

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

### **SUBSURFACE CONDITIONS CAN CHANGE.**

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

### **MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.**

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

## **A REPORT'S CONCLUSIONS ARE PRELIMINARY.**

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

## **THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.**

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

## **BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.**

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

## **READ RESPONSIBILITY CLAUSES CLOSELY.**

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the  
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland