Speedway Store 5310

Tesoro 2 Go Mart #112
ADEC File #100.26.159

August 2020 Monitoring Event Report

Prepared For

Speedway

Stantec

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska Test Method
amsl	above mean sea level
BTEX	benzene, toluene, ethylbenzene, and xylenes
DRO	diesel range organics
DO	dissolved oxygen
EIT	Engineer in Training
EPA	U.S. Environmental Protection Agency
GCL	groundwater cleanup level
GRO	gasoline range organics
MW	monitoring well
ORP	oxidation-reduction potential
QA	quality assurance
QC	quality control
RW	remediation well
Speedway	Speedway, LLC
Stantec	Stantec Consulting Services Inc.
Tesoro	Tesoro Refining and Marketing Company
UST	underground storage tank
VOC	Volatile Organic Compounds

1.0 EXECUTIVE SUMMARY

This semi-annual 2020 monitoring event report was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Speedway LLC for Store #5310 (formerly known as Tesoro 2 Go Mart #112), located at 3392 Badger Road, North Pole, Alaska (**Figure 1**). The monitoring event was conducted by Stantec personnel on August 18, 2020, by Leslie Petre (Engineer-In-Training (EIT)), Austin Badger (Environmental Scientist), and Bob Gilfilian, Principal Engineer.

The August 2020 groundwater monitoring event included measuring the depth to groundwater, measuring water quality parameters, and collecting and analyzing groundwater samples from Monitoring Wells MW-2, MW-3, MW-6, MW-10, MW17-2, and MW17-5 (**Figure 2**). The methods that were used for this monitoring event were conducted in accordance with the Alaska Department of Environmental Conservation (ADEC) approved 2020 Corrective Action Work Plan for this site (see **Appendix B**).

Results from the groundwater depth measurements indicate the average hydraulic gradient was approximately 0.005 feet per foot with flow tending toward the northeast at 67 degrees. The flow direction and gradient for this monitoring event were consistent with the historical values for this site, as shown in the groundwater flow summary presented on **Figure 2**.

Results of the analytical sampling showed concentrations exceeding the ADEC groundwater cleanup levels (GCLs):

- MW-3: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, GRO, and DRO.
- MW 17-2: Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and DRO.
- MW 17-5: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and GRO.

2.0 SITE BACKGROUND

Background information is summarized in **Appendix A**.

3.0 FIELD ACTIVITIES

The following field activities were conducted during this monitoring event:

- Measuring depth to groundwater in Monitoring Wells MW-2, MW-3, MW-6, MW-10, MW17-2, and MW17-5.
- Collecting field measurements of the following intrinsic water quality parameters: temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance.

- Collecting groundwater samples from Monitoring Wells MW-2, MW-3, MW-6, MW-10, MW17-2, and MW17-5, and submitted them for laboratory analysis of: U.S. Environmental Protection Agency (EPA) Method SW8260D for petroleum fuel related Volatile Organic Compounds (VOC) including benzene, toluene, ethylbenzene, and xylenes (BTEX); Alaska Test Method AK101 for GRO; and AK102 for DRO. EP200.8 for sodium was also completed for MW 17-2, MW 17-5, and MW-3 but not on the duplicate for MW-3.
- Completed chemox injection with Klozur One® into remediation wells RW 17-1, 17-3, 17-4 and 17-6. The remediation wells were installed in 2017 in the area of the petroleum-contaminated soil that was buried during the removal of the former underground storage tank (UST) system approximately 20 years ago.

Field methods and procedures are provided in **Appendix B** and field measurements, notes, and a hydraulic gradient plot are provided in **Appendix C**.

4.0 GROUNDWATER MONITORING RESULTS

Groundwater Levels. Table 1 presents groundwater elevations at this site based on the depths to static groundwater levels measured during this monitoring event. When evaluated by a polynomial regression, fitted to the water level observations, the average hydraulic gradient was approximately 0.005 feet per foot with flow tending toward the northeast at 67 degrees (see hydraulic gradient plot in **Appendix C**). The flow direction and gradient for this monitoring event were consistent with the historical data for this site, as shown in the groundwater flow summary presented on **Figure 2**.

Table 1 Groundwater Elevations
Measurements taken on August 18, 2020

Monitoring Well Identification	Top of Casing Elevation (feet)[1]	Depth to Groundwater (feet)	Groundwater Elevation (feet)
MW-2	398.76	8.96	389.80
MW-3	398.80	9.05	389.75
MW-6	401.37	12.32	389.05
MW-10	401.52	12.87	388.65
MW17-2	398.28	8.45	389.83
MW17-5	398.60	8.78	389.82

Key:

1 Based on vertical control survey of September 5, 2017, based on an arbitrary datum of 400 feet established at a local benchmark in 2003. The top of well casings for MW 17-2 and MW 17-5 were surveyed to the same benchmark on July 31 ,2019.

Field Parameters. The results of water quality parameter testing of the water samples collected during this monitoring event are presented in **Table 2**. Temperature, pH, DO, ORP, and specific conductance were measured. Specific conductance values were generally within an expected range and pH values were within an expected range.

Table 2 Field Measured Intrinsic Water Quality Parameters
Measurements taken on August 18, 2020

Monitoring Well Identification	Purged Volume (gallons)	Temp. (°C)	pH	DO (mg/L)	ORP (mV)	SC (µs/cm°C)
MW-2	5.00	3.3	7.36	0.31	64.1	729
MW-3	10.68	5.1	6.46	0.46	15.8	752
MW-6	2.37	5.4	7.54	0.10	57.4	450
MW-10	3.15	4.3	7.71	0.21	53.2	339
MW17-2	3.12	6.0	7.10	0.25	0.40	931
MW17-5	2.19	4.3	6.56	0.34	47.8	495

Key:
mV millivolts
°C degrees Celsius
µs/cm°C microSiemens per centimeter degrees Celsius
mg/L milligrams per liter
DO Dissolved Oxygen
ORP oxidation-reduction potential
pH log [H^+]
SC specific conductance corrected to 25 °C
Temp. Temperature

Water Sample Analytical Results. Historical monitoring data for this site are tabulated in **Appendix D**. Laboratory analytical results for BTEX, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, GRO, DRO, and Sodium in the groundwater samples collected during this monitoring event are summarized in **Tables 3 & 4.** The laboratory analytical report is provided in **Appendix E**.

Table 3 Groundwater Analytical Results for BTEX, GRO, and DRO
Samples collected on August 18, 2020

Sample ID	Benzene[1] (ug/L)	Toluene[1] (ug/L)	Ethylbenzene[1] (ug/L)	Xylenes[1] (ug/L)	GRO (mg/L)	DRO (mg/L)
MW-2	0.740	J (0.886)	7.28	15.6	0.203	0.632
MW-3	**24.4**	194	**637**	**6860**	**12.6**	**2.84**
MW-6	U (0.200)	U (0.500)	U (0.500)	U (1.500)	U (0.0500)	J (0.210)
MW-10	U (0.200)	U (0.500)	U (0.500)	U (1.500)	U (0.0500)	J (0.283)
MW17-2	J (1.70)	**J (1.86)**	**83.7**	**320**	1.76	**1.96**
MW17-5	**30.8**	386	**151**	**896**	**2.68**	0.825
DUP of MW-3	**22.6**	176	**615**	**6530**	**12.3**	**3.41**
Trip Blank	U (0.200)	U (0.500)	U (0.500)	U (1.500)	U (0.500)	U (0.300)
GCLs	**4.6**	**1100**	**15**	**190**	**2.2**	**1.5**

Key:
1 Analyzed by U.S. Environmental Protection Agency Method 8260D.
AK Alaska test method
BTEX benzene, toluene, ethylbenzene, and xylenes
DRO Diesel range organics, analyzed by AK102.
GCLs Groundwater cleanup levels, 18 AAC75.345, Table C, updated September 29, 2018.
GRO Gasoline range organics, analyzed by AK101.
mg/L milligrams per liter
NA Not applicable
NT Not tested
U Undetected above practical quantitation limits shown in parentheses.
J The identification of the analyte is acceptable; the reported value is an estimate.
Bold indicates the concentration exceeds the GCL or the estimated quantitation limit exceeds the GCL

Table 4 Groundwater Analytical Results for VOCs and Sodium
Samples collected on August 18, 2020

Sample ID	1,2,4 Trimethylbenzene[1] (ug/L)	1,3,5 Trimethylbenzene[1] (ug/L)	Naphthalene[1] (ug/L)	Sodium (ug/L)
MW-2	6.42	6.97	J (0.779)	NT
MW-3	**2260**	**633**	**34.8**	28800
MW-6	U (0.500)	U (0.500)	U (0.500)	NT
MW-10	U (0.500)	U (0.500)	U (0.500)	NT
MW17-2	**457**	**88**	**8.05**	41600
MW17-5	**190**	**117**	**7.29**	12400
DUP of MW-3	**2200**	**625**	**35.6**	NT
Trip Blank	U (0.500)	U (0.500)	U (0.500)	U (250)
GCLs	**56**	**60**	**1.7**	**NA**

Key:
1 Analyzed by U.S. Environmental Protection Agency Method 8260D.
AK Alaska test method
BTEX benzene, toluene, ethylbenzene, and xylenes
DRO Diesel range organics, analyzed by AK102.
GCLs Groundwater cleanup levels, 18 AAC75.345, Table C, updated September 29, 2018.
GRO Gasoline range organics, analyzed by AK101.
mg/L milligrams per liter
NA Not applicable
NT Not tested
U Undetected above practical quantitation limits shown in parentheses.
J The identification of the analyte is acceptable; the reported value is an estimate.
Bold indicates the concentration exceeds the GCL or the estimated quantitation limit exceeds the GCL

Surrogate recovery for 4-bromofluorobenzene did not met the laboratory QC criteria due to matrix interference for MW-3 and the duplicate sample of MW-3. This laboratory test is part of AK101 GRO analysis. Historically, MW-3 has tested high for all analytes of concern. A duplicate of sodium was not pulled for MW-3.

Quality Assurance (QA)/Quality Control (QC) Review. SGS North America Inc. did meet all laboratory QA/QC criteria during the analysis of groundwater samples for this sampling event, as described in **Table 5**, which provides a summary of the laboratory QC objectives and outcomes for this monitoring event. Laboratory QC data and the ADEC Laboratory Data Review Checklist are included with the laboratory report in **Appendix E**.

Table 5 Laboratory Quality Control Objectives

Quality Control Designation	Tolerance	Results for this Event
Holding Times		
DRO/Water/to analyze	40 days	14 days
DRO/Water/to extract	14 days	9 days
GRO/Water/to analyze	14 days	9 days
BTEX/Water/to analyze	14 days	5 to 6 days
Field Duplicates – Precision		
Benzene	30%	7.66%
Toluene	30%	9.73%
Ethylbenzene	30%	3.51%
Xylenes	30%	4.93%
1,2,4 Trimethylbenzene	30%	2.69%
1,3,5 Trimethylbenzene,	30%	1.27%
Naphthalene	30%	2.27%
GRO	30%	2.41%
DRO	30%	18.24%

Key:
% Percentage of variance in absolute value
BTEX benzene, toluene, ethylbenzene, and xylenes
DRO diesel range organics
GRO gasoline range organics

Sample DUP is a quality control duplicate of Sample MW-3. The duplicate sample set was collected to determine the precision of the field collection and laboratory analyses for this sampling event. Data presented in **Table 5** show that the precision for the duplicate sample set was within the established QA criteria tolerances for all analytes duplicated. The holding times were within established criteria

5.0 IN-SITU CHEMOX REMEDIATION

Stantec completed an injection of the chemox product, Klozur One®, into the four remediation wells (RW17-1, RW17-3, RW17-4, and RW17-6) on August 19, 2020. Klozur One® is a granular product manufactured by PeroxyChem that consists primarily of sodium persulfate and patented activator reagents. A total of 440 pounds of Klozur One® product was mixed with 200 gallons of clean water and then injected as a solution into the contaminated source area by gravity and a low pressure pump into the four remediation wells. The solution was then pushed into the formation with an additional 200 gallons of water injected into each remediation well.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Graphs of contaminant concentrations and groundwater elevations for Monitoring Wells MW-2 and MW-3 are presented on **Figure 4**.

The following summarizes laboratory test results that exceeded the GCLs for the August 2020 semi-annual groundwater monitoring event:

- Monitoring Well MW-3: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, GRO, and DRO.
- Monitoring Well MW 17-2: Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and DRO.
- Monitoring Well MW 17-5: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and GRO.

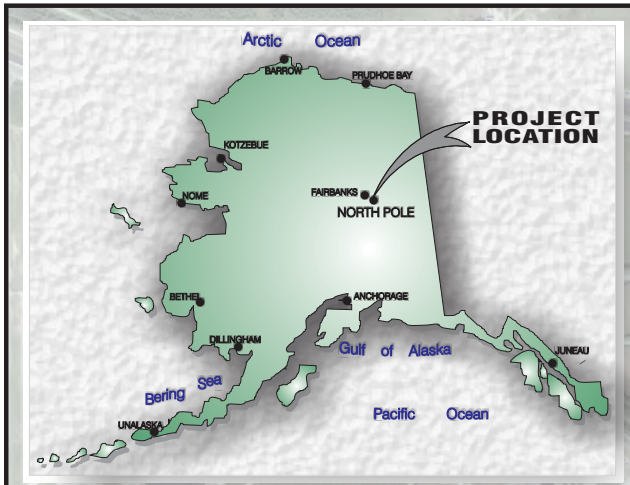
No anomalies were found during the August 2020 semi-annual monitoring event that would require additional corrective action or changes to the approved year 2020 Corrective Action Work Plan for this site.

7.0 LIMITATIONS

Stantec conducted this monitoring event in accordance with the Corrective Action Work Plan approved by ADEC, and in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. All sampling activities were completed in accordance with the ADEC *Underground Storage Tanks Procedures Manual – Standard Sampling Procedures* (March 22, 2017) and Field Guidance issued in October 2019. No other warranty, expressed or implied, is made. Data and recommendations made herein were prepared for Speedway, LLC Store 5310, formally known as Tesoro 2 Go Mart #112 and Tesoro Refining and Marketing Company. Information herein is for use at this site in accordance with the purpose of the report described.

FIGURES

uPDATED October 2019 Fig01 Location and Vicinity Map by LP



RICHARDSON HWY

BADGER ROAD

HURST ROAD

112

OLD RICHARDSON HWY

N SANTA CLAUS LN

N

0 500'

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SPEEDWAY STORE 5310
A.K.A TESORO 2 GO MART #112

AUGUST 2020
MONITORING EVENT REPORT

LOCATION AND VICINITY MAP

FIGURE
1
185704928

0 50'

COLONIAL PLAZA MALL
DRINKING WELL,
MORNING STAR SUB. TRACT D
APPROXIMATELY 180'
NORTH OF THIS POINT

BADGER ROAD

TRACT A-1

TRACT A-2

UST

FUEL
DISCHARGE
CANOPY

FORMER UST
(DECOMMISSIONED IN PLACE)

FORMER
UST
FUELING
SYSTEM

TESORO
2 GO MART
#112

BEAVER SPRINGS CREEK

PP

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10

RW 17-1 RW 17-3 RW 17-4 RW 17-6

MW 17-2 MW 17-5

MW-3	
Benzene	24.4 ug/L
Toluene	194 ug/L
Ethylbenzene	637 ug/L
Xylenes	6860 ug/L
GRO	12.6 mg/L
DRO	2.84 mg/L
GW Elev	389.75 feet

MW-3	(Duplicate)
Benzene	22.6 ug/L
Toluene	176 ug/L
Ethylbenzene	615 ug/L
Xylenes	6530 ug/L
GRO	12.3 mg/L
DRO	3.41 mg/L

MW-4	
GW Elev	NC

MW 17-2	
Benzene	J (1.70 ug/L)
Toluene	J (1.86 ug/L)
Ethylbenzene	83.7 ug/L
Xylenes	320 ug/L
GRO	1.76 mg/L
DRO	1.96 mg/L
GW Elev	389.83 feet

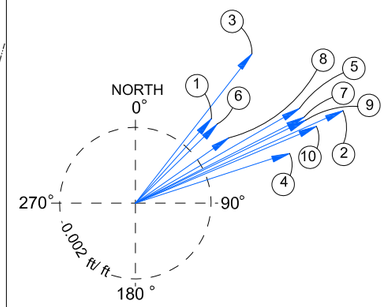
MW 17-5	
Benzene	30.8 ug/L
Toluene	386 ug/L
Ethylbenzene	151ug/L
Xylenes	896 ug/L
GRO	2.68 mg/L
DRO	0.825 mg/L
GW Elev	389.82 feet

MW-1	
GW Elev	NC

MW-2	
Benzene	0.740 ug/L
Toluene	J (0.886 ug/L)
Ethylbenzene	7.28 ug/L
Xylenes	15.6 ug/L
GRO	0.203 mg/L
DRO	0.632 mg/L
GW Elev	389.80 feet

MW-10	
Benzene	U (0.200 ug/L)
Toluene	U (0.500 ug/L)
Ethylbenzene	U (0.500 ug/L)
Xylenes	U (1.500 ug/L)
GRO	U (0.050 mg/L)
DRO	U (0.293 mg/L)
GW Elev	388.65 feet

MW-6	
Benzene	U (0.200 ug/L)
Toluene	U (0.500 ug/L)
Ethylbenzene	U (0.500 ug/L)
Xylenes	U (1.500 ug/L)
GRO	U (0.050 mg/L)
DRO	U (0.210 mg/L)
GW Elev	389.05 feet



GROUNDWATER FLOW SUMMARY

	DATE	BEARING	GRADIENT (ft/ft)
1	MAY 26, 2015	42°	0.003
2	OCT. 15, 2015	66°	0.006
3	MAY 11, 2016	38°	0.005
4	OCT. 5, 2016	72°	0.005
5	MAY 8, 2017	60°	0.005
6	JUNE 14, 2018	46°	0.003
7	OCT. 30, 2018	63°	0.005
8	MAY 9, 2019	55°	0.003
9	OCT 22, 2019	64°	0.005
10	AUG 18, 2020	67°	0.005

LEGEND:

	PROPERTY LINE
	MONITORING WELL
DRO	DIESEL RANGE ORGANICS
GRO	GASOLINE RANGE ORGANICS
J	ESTIMATED BY LABORATORY
GW ELEV.	GROUNDWATER ELEVATION IN FEET
NC	NOT CALCULATED
PP	POWER POLE
	REMEDIATION WELL
U	UNDETECTED ABOVE PRACTICAL QUANTITATIVE LIMITS SHOWN IN PARENTHESES
UST	UNDERGROUND STORAGE TANK

NOTES:

1. RESULTS SHOWN ARE FOR WELLS SAMPLED ON AUGUST 18, 2020
2. BOLD/ RED TEXT INDICATES CONTAMINANT CONCENTRATIONS ABOVE CLEANUP LEVELS FOR THIS SITE

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SPEEDWAY STORE #5310
A.K.A.TESORO 2 GO MART #112
AUGUST 2020
MONITORING EVENT REPORT

SITE PLAN WITH
GROUNDWATER DETECTIONS
AND EXCEEDANCES

FIGURE
2
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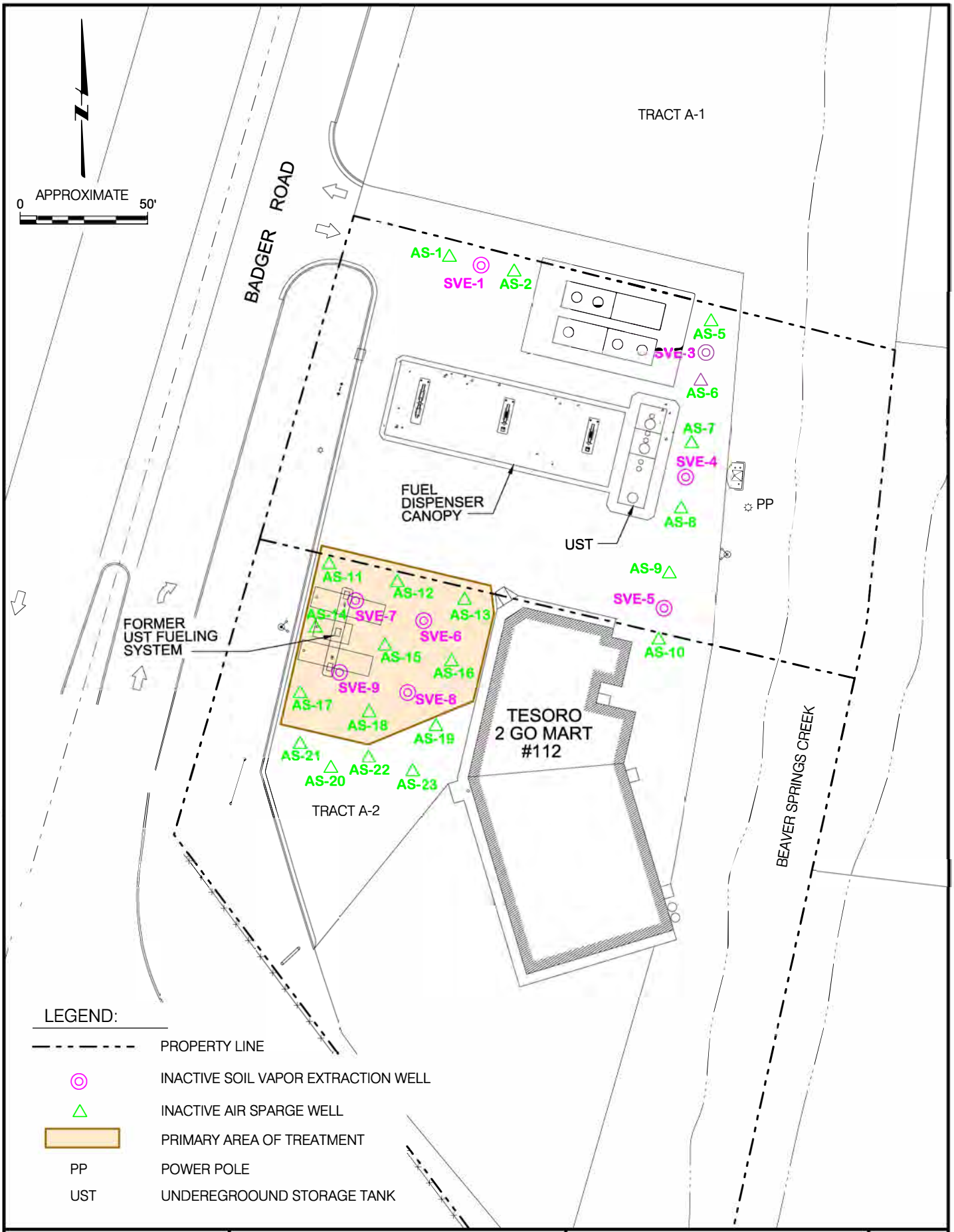

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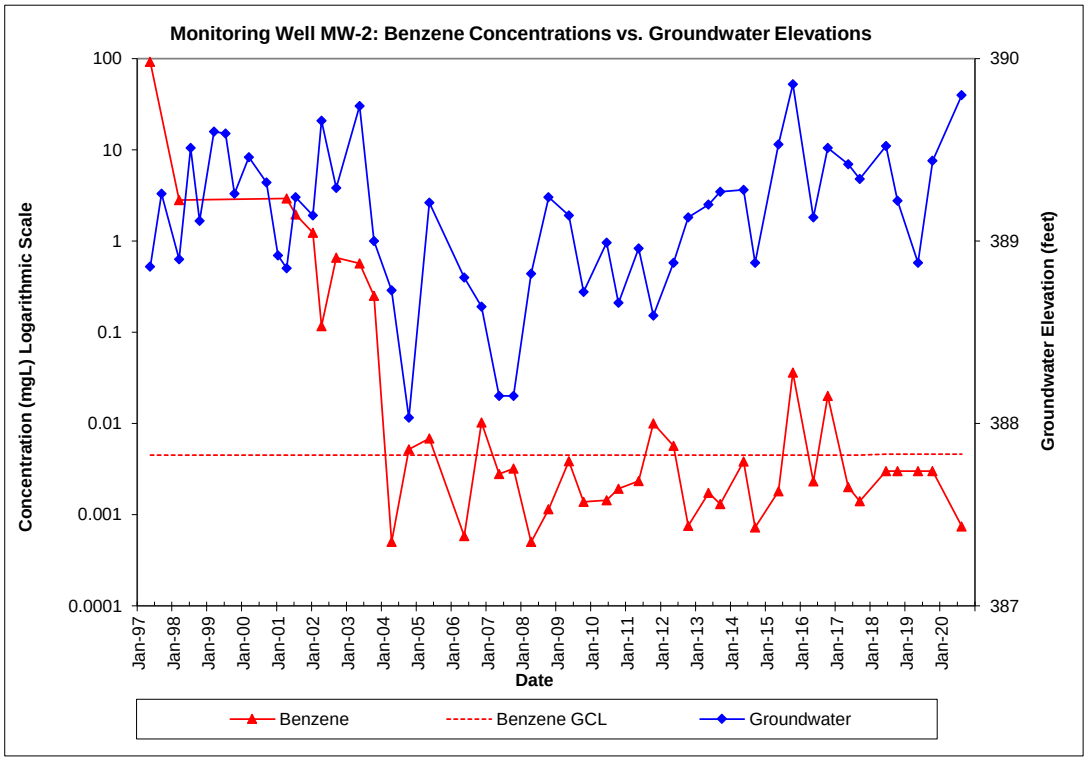
SPEEDWAY STORE 5310
A.K.A.TESORO 2 GO MART #112
AUGUST 2020
MONITORING EVENT REPORT

REMEDIATION SYSTEM LAYOUT

FIGURE
3
185704928

Figure 4
Graphs of Contaminant Concentrations and Groundwater Elevations



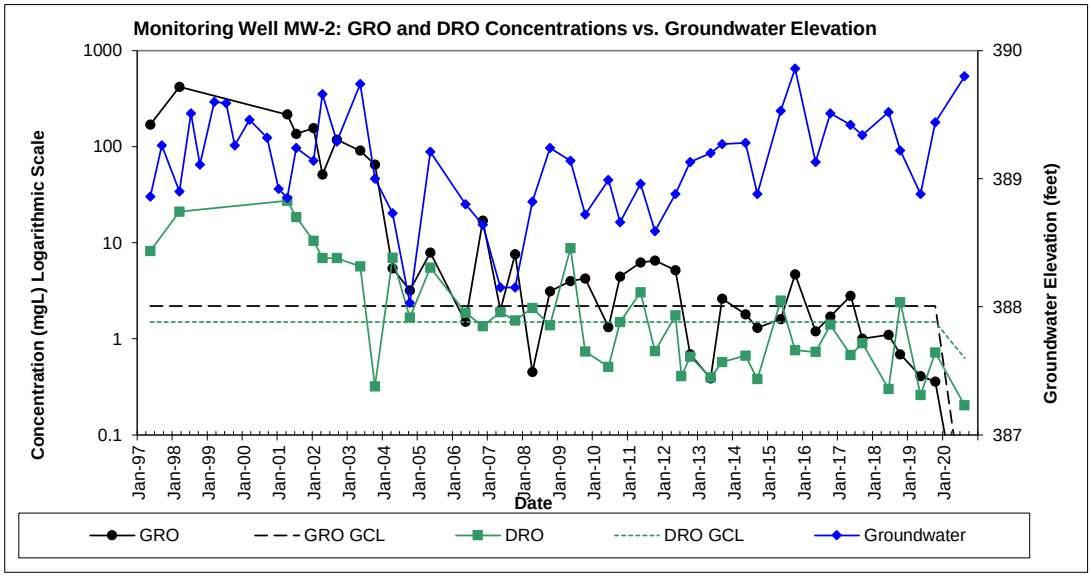
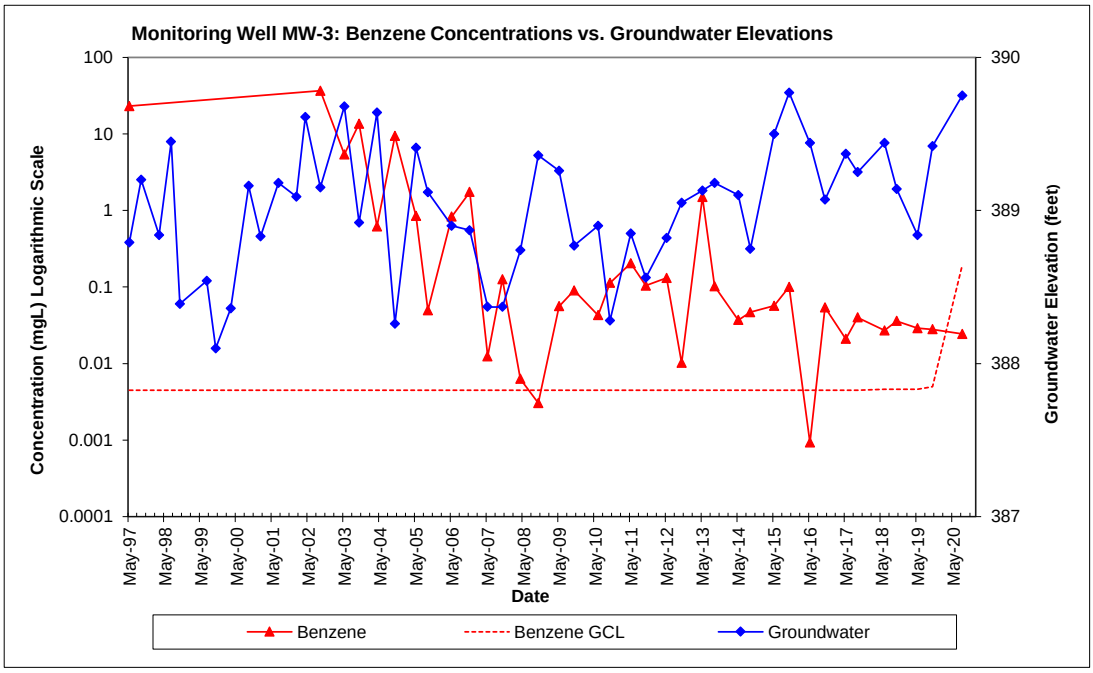
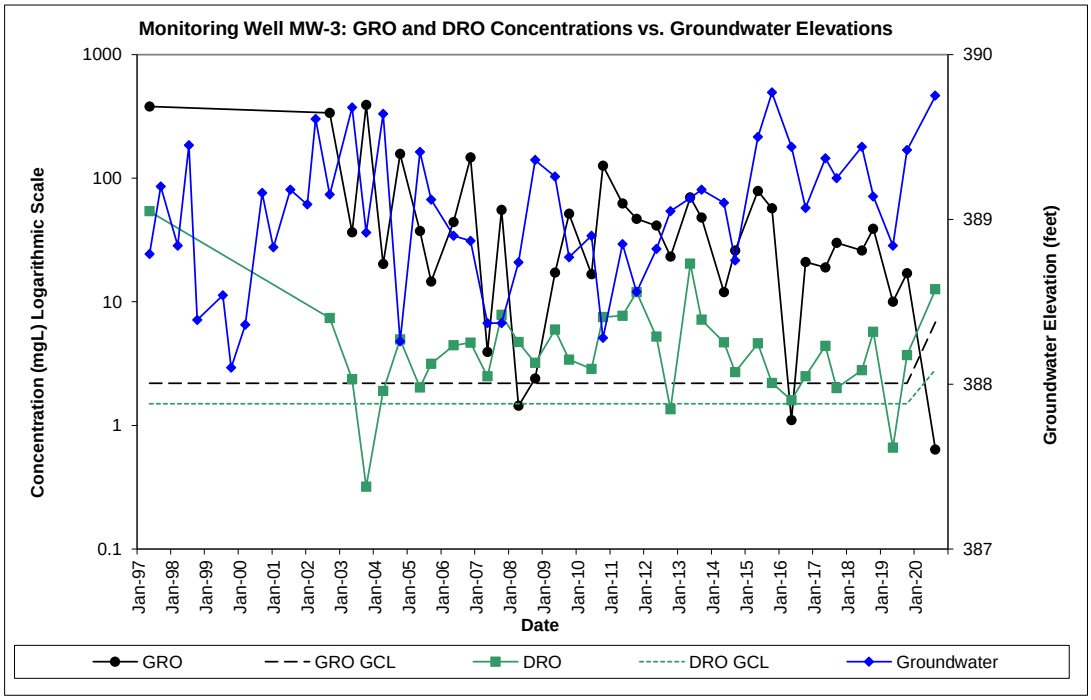


Figure 4
Graphs of Contaminant Concentrations and Groundwater Elevations





APPENDIX A

Site Background

APPENDIX A – SITE BACKGROUND

Tesoro 2 Go Mart #112 (3392 Badger Road, North Pole, Alaska)
ADEC Facility ID #1116; ADEC File #100.26.159

Tesoro 2 Go Mart #112 is a retail fuel service/convenience store located northeast of the Richardson Highway overpass on Badger Road in North Pole, Alaska. The property is approximately 1.9 acres in size and the legal description is Tract A-2, Morningstar Subdivision. The store is in the north end of a small strip mall. Beaver Springs Creek flows to the north immediately behind the strip mall. Three underground storage tanks (USTs) were initially installed to serve the original convenience store in December 1984.

November 1996. During field installation of a cathodic protection system on the USTs, a petroleum hydrocarbon release was discovered in several subsurface boreholes drilled around the perimeter of the USTs.

May 1997. Gilfilian Engineering and Environmental Testing, Inc. (GE^2T) completed a Phase 1 Release Investigation (RI) at the site and installed four groundwater monitoring wells. In addition, representative water samples were collected from the mall drinking water system (served by an on-site water well) and from Beaver Springs Creek. Petroleum contaminants were detected above Alaska Department of Environmental Conservation (ADEC) cleanup levels in samples collected from all four soil borings/monitoring wells. Petroleum contaminants were detected at very low concentrations in the creek water samples, and none in the drinking water sample.

September 1997. Free phase petroleum was discovered in two of the four groundwater monitoring wells at the site, and dissolved petroleum contaminants was detected above ADEC groundwater cleanup levels (GCLs) in the other two monitoring wells.

March 1998. A well search was conducted within a ¼-mile radius of the site. The findings of the well search noted there were approximately 24 domestic water supply wells within the search radius.

August/September 1998. GE^2T conducted a UST Closure Site Assessment (SA) at the site. Three USTs and associated piping and dispensers were removed from the site and a new UST system was installed on an adjacent downgradient lot (to the north) of the site on Tract A-1 Morning Star Subdivision. Petroleum hydrocarbon contamination was found in the monitoring wells constructed in the area of the former and new UST systems. Seven soil vapor extraction (SVE) wells and sixteen air sparge (AS) wells systems were installed at the site for remediation of contamination found in the vadose soil zone and groundwater table beneath the site. Additional AS and SVE wells were installed at a later date

September 1999. An SA was completed for the removal of the new UST that were installed in September 1998 and replace with a new UST. Soil contamination was discovered in the area of

the replacement UST system. Contaminated soil was removed and transported off-site for thermal treatment.

June 2000. GE^{2}T conducted a RI for installation of an additional monitoring well (MW-6) at the site. No contaminants were detected in soil samples from the boring.

March 2001. A Falco 300 Cat-Ox unit was installed as part of the remediation system to treat vapors captured in the SVE system.

September/October 2003. MWH Americas, Inc. (MWH) completed a RI that included the installation of additional AS and groundwater monitoring wells. The RI involved drilling five soil borings, of which four were completed as AS wells (AS-20, AS-21, AS-22, and AS-23) and one monitoring well (MW-7). Contaminants were detected in soil from borings MW-7, AS-20, and AS-21 and the water sample from MW-7.

March 2004. MWH completed a RI that involved the drilling two soil borings. These borings were completed as 2-inch diameter monitoring wells (MW-8 and MW-9). Laboratory results indicate that no contaminants were detected in the soil or groundwater samples collected.

September 2004. MWH completed a RI that involved the drilling of one soil boring. The boring that was completed as 2-inch diameter monitoring well (MW-10). Laboratory results indicate that no contaminants were detected in the soil samples collected. Benzene was detected above the GCL water sample collected from MW-10.

May 2005. Benzene, toluene, ethylbenzene, GRO, and DRO were detected above the ADEC GCLs in Monitoring Well MW-3. Benzene, GRO, and DRO were also detected above the GCLs in Monitoring Well MW-2. No analytes of concern were detected above the GCLs in any of the other tested wells. The AS and SVE systems remained in operation.

September 2005. Benzene, GRO, and DRO were detected above the ADEC GCLs in Monitoring Wells MW-2 and MW-3. Toluene was also detected above the GCL in Monitoring Well MW-3. No analytes of concern were detected above the GCLs in Monitoring Well MW-10. The AS and SVE systems remained in operation. The SVE exhaust vapor concentrations had decreased to a relatively low level that no longer necessitated the use of the catalytic oxidizer unit. Therefore, the catalytic oxidizer was disconnected from the SVE system in summer 2005.

May 2006. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above the ADEC GCLs in Monitoring Well MW-3. GRO and DRO were also detected above the GCLs in Monitoring Well MW-2. No analytes of concern were detected above the GCLs in Monitoring Wells MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10. The AS and SVE system were shut down until system maintenance could be performed.

November 2006. Benzene, toluene, ethylbenzene, and gasoline range organics were detected above the ADEC GCLs in Monitoring Wells MW-2 and MW-3. Xylenes and diesel range organics

were also detected above the GCLs in Monitoring Well MW-3. No analytes of concern were detected above the GCLs in Monitoring Well MW-10. AS and SVE system were brought back online after system repair was performed.

May 2007. GRO and DRO were detected above the ADEC GCLs in Monitoring Wells MW-2 and MW-3. Benzene, toluene, ethylbenzene, and xylenes were detected above the practical quantitation limits (PQLs) in Monitoring Wells MW-2 and MW-3, but only benzene was above the GCL. DRO was detected above the PQL, but below the GCL, in Monitoring Wells MW-4 and MW-5. No analytes of concern were detected above the PQLs in Monitoring Wells MW-1, MW-6, MW-8, MW-9, and MW-10. AS and SVE system remain in operation.

April 2008. DRO was detected above the ADEC GCLs in Monitoring Wells MW-2, MW-3, and MW-4. GRO were detected above the ADEC GCLs in Monitoring Wells MW-3 and MW-4. Benzene was also detected above the GCLs in Monitoring Well MW-3. DRO in Monitoring Well MW-1; ethylbenzene, xylenes, and GRO in MW-2; toluene, ethylbenzene, and xylenes in Monitoring Well MW-3; and benzene, toluene, ethylbenzene, and xylenes in Monitoring Well MW-4 were detected above the PQLs, but below the GCLs. No analytes were detected above the PQLs in Monitoring Wells MW-5 through MW-10. AS and SVE system remain in operation.

October 2008. DRO were detected above the ADEC GCL in Monitoring Well MW-3. GRO were detected above the GCL in Monitoring Wells MW-2 and MW-3. All other analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-2 and MW-3. No analytes were detected above the PQLs in Monitoring Well MW-10. AS and SVE system remain in operation.

May 2009. Diesel range organics were detected above the ADEC GCLs in Monitoring Wells MW-1, MW-2, and MW-3. GRO were detected above the GCL in Monitoring Wells MW-2 and MW-3. Benzene was detected above the GCL in Monitoring Well MW-3. All other analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-2 and MW-3. Toluene in Monitoring Wells MW-1 through MW-4, and MW-8; ethylbenzene in Monitoring Wells MW-1 through MW-3, MW-7, and MW-8; xylenes in Monitoring Wells MW-1 through MW-4 and MW-7 through MW-9; and GRO in Monitoring Well MW-7 were detected above PQLs but below GCLs. All other analytes in the above wells sampled were not detected above the PQLs. No analytes were detected above the PQLs in Monitoring Wells MW-5, MW-6, and MW-10. AS and SVE system remain in operation.

October 2009. All analytes tested were detected above the ADEC GCLs in Monitoring Well MW-3. Ethylbenzene and gasoline range organics were detected above the GCLs in Monitoring Well MW-2. Benzene, toluene, xylenes, and diesel range organics were detected above the practical quantitation limits, but below the GCLs, in Monitoring Well MW-2. No analytes of concern were detected above the practical quantitation limits in Monitoring Well MW-10. AS and SVE system remain in operation.

June 2010. Benzene, GRO, and DRO were detected above the ADEC groundwater cleanup levels GCLs in Monitoring Well MW-3. Toluene, ethylbenzene, and xylenes were detected above the

PQLs, but below the GCLs, in Monitoring Well MW-3. Benzene, toluene, ethylbenzene, xylenes, and GRO were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-1 and MW-2. DRO was also detected above the PQL, but below the GCL, in Monitoring Well MW-2. No analytes of concern were detected above the PQLs in Monitoring Wells MW-4, MW-6, or MW-10. AS and SVE system remain in operation. Measurements of the SVE exhaust with a PID indicated low amounts of volatile petroleum hydrocarbons are being removed from the vadose soil zone.

October 2010. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above the ADEC GCLs in Monitoring Well MW-3. GRO was detected above the GCL in Monitoring Well MW-2. Benzene, toluene, ethylbenzene, xylenes, and DRO were detected above the PQLs, but below the GCLs, in Monitoring Well MW-2. No analytes of concern were detected above the PQLs in Monitoring Well MW-10. AS and SVE system remain in operation.

May 2011. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above the ADEC GCLs in Monitoring Well MW-3. GRO and DRO were detected above the GCL in Monitoring Well MW-2. Benzene, toluene, ethylbenzene, and xylenes were detected above the PQLs, but below the GCLs, in Monitoring Well MW-2. Toluene, ethylbenzene, xylenes, GRO, and DRO were also detected above the PQLs, but below the GCLs, in Monitoring Well MW-1. Benzene was not detected above the PQL in Monitoring Well MW-1. No analytes of concern were detected above the PQLs in Monitoring Wells M-4, MW-6, and MW-10. AS and SVE system remain in operation.

October 2011. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above the ADEC GCLs in Monitoring Well MW-3. GRO was detected above the GCL in Monitoring Well MW-2. Ethylbenzene, xylenes, and DRO were detected above the PQLs, but below the GCLs, in Monitoring Well MW-2. Benzene and toluene were not detected above the PQLs in MW-2; however, the PQL for benzene is above the GCL and the result might exceed the GCL. No analytes of concern were detected above the PQLs in Monitoring Wells MW-6 and MW-10. The AS and SVE systems remain in operation on a full-time basis.

May 2012. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. Benzene and GRO were detected above GCLs in Monitoring Well MW-2. Benzene, toluene, ethylbenzene, xylenes, and GRO were detected above PQLs and below GCLs in Monitoring Well MW-1. Toluene, ethylbenzene, and xylenes were detected above PQLs and below GCLs in Monitoring Well MW-2. No other analytes were detected above the PQLs in any of the samples collected during this monitoring event. The AS and SVE systems remained in operation on a full-time basis.

October 2012. Benzene and GRO were detected above GCLs in Monitoring Well MW-3. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above PQLs and below GCLs in Monitoring Well MW-2. Toluene, ethylbenzene, xylenes, and DRO were detected above PQLs and below GCLs in Monitoring Well MW-3. The AS and SVE systems were taken offline pending repairs and improvements. A total of 130 gallons of Klozur CR® was applied at the site

over two events. Approximately 10 gallons of Klozur CR was poured into SVE-7, and approximately 55 gallons into SVE-9 on August 29, 2012. Additionally, 65 gallons of Klozur CR were injected into Well SVE-9 on October 9, 2012.

May 2013. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. Benzene, ethylbenzene, xylenes, GRO, and DRO were detected above PQLs but below GCLs in Monitoring Well MW-1. Benzene, toluene, ethylbenzene, xylenes, and GRO were detected above PQLs but below GCLs in Monitoring Well MW-2. The AS and SVE systems remain offline pending repairs and improvements.

September 2013. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. GRO was detected above GCL in Monitoring Well MW-2. Benzene, toluene, ethylbenzene, xylenes, and DRO were detected above PQLs but below GCLs in Monitoring Well MW-2. The AS and SVE systems remain offline pending repairs and improvements.

May 2014. Benzene, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. Ethylbenzene, xylenes, and DRO were detected above PQL and below GCLs in Monitoring Well MW-1. Benzene, ethylbenzene, xylenes, GRO, and DRO were detected above PQLs but below GCLs in Monitoring Well MW-2. Toluene, ethylbenzene, and xylenes were detected above PQLs and below GCLs in Monitoring Well MW-3. Xylenes were detected above PQLs but below GCLs in Monitoring Well MW-10. The AS and SVE systems remain offline pending repairs and improvements.

September 2014. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. Benzene, toluene, ethylbenzene, xylenes, and GRO were detected above PQLs and below GCLs in Monitoring Well MW-2. The AS and SVE systems remain offline pending repairs and improvements.

May 2015. Benzene, toluene, ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. DRO was detected above GCL in Monitoring Wells MW-1 and MW-2. Toluene, ethylbenzene, xylenes, and GRO were detected above PQLs but below GCLs in Monitoring Well MW-1. Benzene, ethylbenzene, xylenes, and GRO were detected above PQLs but below GCLs in Monitoring Well MW-2. DRO was detected above PQL but below GCL in Monitoring Well MW-4. The AS and SVE systems remain offline pending repairs and improvements.

October 2015. Benzene and GRO were detected above GCLs in Monitoring Well MW-2. Benzene, toluene, ethylbenzene, total xylenes, GRO, and DRO were detected above GCLs in Monitoring Well MW-3. One or more analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-2 (all analytes), MW-6 (DRO), and MW-10 (DRO). The AS and SVE systems remain offline pending repairs and improvements. Chemical oxidation of the groundwater at the site was conducted on October 6, 2015, with the injection of Klozur CR® into

Injection Well SVE-6 and well clusters SVE-7 and SVE-9 located at the footprint of the former underground storage tanks (USTs – Figure 3). Follow-up intrinsic measurements indicated negligible influence of the injection on groundwater at Monitoring Well MW-3.

May 2017. Results of analytical sampling showed concentrations exceeding the GCLs for:

- Monitoring Well MW-1: ethylbenzene, xylenes, 1,2,4-trimethylbenzene, and DRO.
- Monitoring Well MW-2: ethylbenzene, xylenes, 1,2,4-trimethylbenzene, naphthalene, and GRO.
- Monitoring Well MW-3: benzene, ethylbenzene, xylenes, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, naphthalene, GRO, and DRO.

One or more analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-1, MW-2, MW-3, MW-4, and MW-10.

September 2017: Results of the semi-annual groundwater monitoring event conducted in September 2017 showed concentrations exceeding the GCLs for ethylbenzene in Monitoring Well MW-2; and benzene, ethylbenzene, xylenes, GRO, and DRO in MW-3. Monitoring Wells MW-6 and MW-10 were found to be absent of contaminants of concern. These findings are similar to results found in previous monitoring events

June 2018. Results of analytical sampling showed concentrations exceeding the GCLs for:

- Monitoring Well MW-1: 1,2,4-trimethylbenzene.
- Monitoring Well MW-2: ethylbenzene, 1,2,4-trimethylbenzene, benzopyrene, and indenopyrene.
- Monitoring Well MW-3: benzene, ethylbenzene, xylenes, GRO, DRO, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene.
- Monitoring Well MW 17-5: benzene, ethylbenzene, xylenes, and 1,2,4-trimethylbenzene.

One or more analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-1, MW-2, MW-3, MW-4, and MW-17-5.

October 2018. The following summarizes results exceeding the GCLs for the October 2018 semi-annual groundwater monitoring event:

- Monitoring Well MW-2: ethylbenzene and DRO.
- Monitoring Well MW-3: benzene, ethylbenzene, xylenes, GRO, DRO, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene.
- Monitoring Well MW 17-2: ethylbenzene, xylenes, GRO, DRO and 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and naphthalene.
- Monitoring Well MW 17-5: benzene, ethylbenzene, xylenes, GRO, 1,2,4-trimethylbenzene,1,3,5-trimethylbenzene, and naphthalene

One or more analytes were detected above the PQLs, but below the GCLs, in Monitoring Wells MW-2, MW-3, MW-6, and MW-17-5.

In addition, several volatile organic compounds (VOCs) were reported by the laboratory as undetected but had laboratory reporting limits that equaled or exceeded their corresponding GCLs.

The chemical oxidation (chemox) treatment process was delayed until the third quarter of 2018 due to replacement of the chemical oxidant. In September 2018, Stantec completed an injection of the replacement chemox product, Klozur One®, into the four remediation wells. Klozur One® is a granular product manufactured by PeroxyChem that consists primarily of sodium persulfate and patented activator reagents. A total of 220 pounds of Klozur One® product was mixed with clean water and then manually injected as a solution into the contaminated source area via Remediation Wells RM17-1, RM17-3, RM17-4, and RM17-6. Each of the four remediation wells received 55 pounds of Klozur One® that was prepared as a solution with 50 gallons of clean water. Following the injection of the chemox solution, a combined total of 550 gallons of clean water was injected in all the wells. It was noted that each of the remediation wells had different acceptance rates for delivery of the clean water that ranged from 55 to 210 gallons each.

May 2019. This May 2019 semi-annual groundwater monitoring event included measuring the depth to groundwater, measuring water quality parameters, and collecting and analyzing groundwater samples from Monitoring Wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-10, MW 17-2, and MW 17-5. The methods that were used for this monitoring event were conducted in accordance with the Alaska Department of Environmental Conservation (ADEC) approved 2019 Corrective Action Work Plan for this site.

Results from the groundwater depth measurements indicate the average hydraulic gradient was approximately 0.003 feet per foot with flow tending toward the northeast at 55 degrees. The flow direction and gradient for this monitoring event were consistent with the historical values for this site.

Results of the analytical sampling showed concentrations exceeding the ADEC groundwater cleanup levels (GCLs) for the following monitoring wells:

- Monitoring Well MW-2: ethylbenzene.
- Monitoring Well MW-3: benzene, ethylbenzene, xylenes, gasoline range organics (GRO), and naphthalene.
- Monitoring Well MW 17-5: ethylbenzene.

October 2019. This October 2019 semi-annual groundwater monitoring event included measuring the depth to groundwater, measuring water quality parameters, and collecting and analyzing groundwater samples from Monitoring Wells MW-2, MW-3, MW-6, MW-10, MW 17-2, and MW 17-5. The methods that were used for this monitoring event were conducted in accordance with the ADEC approved 2019 Corrective Action Work Plan for this site.

Results from the groundwater depth measurements indicate the average hydraulic gradient was approximately 0.005 feet per foot with flow tending toward the northeast at 64 degrees. The flow direction and gradient for this monitoring event were consistent with the historical values for this site.

Results of the analytical sampling showed concentrations exceeding the ADEC GCLs for the following monitoring wells:

- Monitoring Well MW-2: ethylbenzene.
- Monitoring Well MW-3: benzene, ethylbenzene, xylenes, GRO, and DRO.
- Monitoring Well MW 17-2: ethylbenzene, xylenes, and GRO.
- Monitoring Well MW 17-5: benzene, ethylbenzene, xylenes, and GRO.

Stantec completed an injection of 220 pounds of the chemox product, Klozur One®, into the four remediation wells (RW17-1, RW17-3, RW17-4, and RW17-6).

August 2020. The semi-annual groundwater monitoring event included measuring the depth to groundwater, measuring water quality parameters, and collecting and analyzing groundwater samples from Monitoring Wells MW-2, MW-3, MW-6, MW-10, MW17-2, and MW17-5. The methods that were used for this monitoring event were conducted in accordance with the Alaska Department of Environmental Conservation (ADEC) approved 2020 Corrective Action Work Plan for this site.

Results from the groundwater depth measurements indicate the average hydraulic gradient was approximately 0.005 feet per foot with flow tending toward the northeast at 67 degrees. The flow direction and gradient for this monitoring event were consistent with the historical values for this site.

The following summarizes laboratory test results that exceeded the GCLs for the August 2020 semi-annual groundwater monitoring event:

- Monitoring Well MW-3: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, GRO, and DRO.
- Monitoring Well MW 17-2: Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and DRO.
- Monitoring Well MW 17-5: Benzene, Ethylbenzene, Total Xylenes, 1-2-4 Trimethylbenzene, 1-3-5 Trimethylbenzene, Naphthalene, and GRO.

Stantec completed an injection of 220 pounds of the chemox product, Klozur One®, into the four remediation wells (RW17-1, RW17-3, RW17-4, and RW17-6).

APPENDIX B

Field Methods and Procedures

2020 Work Plan Schedule for Speedway Store 5310
(Formerly Tesoro 2Go Mart 112)

Work Plan Task		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Task 1	Monitoring Wells: MW-2, MW-3, MW-6, MW-10, MW17-2 and MW17-5.		D, G, V, P, I, S*		D, G, I, V, S*
	Monitoring Wells MW-1 and MW-4		D, G, V, P, I		
Task 2	Chemical Oxidation Treatment		✓	✓	

Key:
AK – Alaska Test Method
D – Diesel range organics by AK102.
EPA – U.S. Environmental Protection Agency
G – Gasoline range organics by AK101.
I – Indicators, parameters tested include dissolved oxygen, specific conductance, oxygen-reduction potential, pH, and temperature.
P – Polynuclear aromatic hydrocarbons (PAHs), i.e., semi-volatile organic compounds, by EPA Test Method 8270D Selective Ion Monitoring.
V – Volatile organic compounds by EPA Test Method 8260C.
S* - Sodium which will only be tested in wells MW-3, MW 17-2 and MW 17-5.

The Corrective Action Work Plan for the year 2020 will be implemented by Stantec on behalf of Speedway. Groundwater monitoring will be conducted to track migration and trends of contaminants that are present at the site. All sampling activities will be completed in accordance with ADEC's *Underground Storage Tanks Procedures Manual– Standard Sampling Procedures* (March 22, 2017). The methods that will be used for conducting a monitoring event, unless otherwise noted in the monitoring report, will include:

- The static water levels in the monitoring wells will be measured with respect to the top of each well casing. The elevation of the static water level will be based on an arbitrary datum established on-site during a vertical control survey that will be completed by Stantec on an annual basis. The survey will be performed during the summer after the seasonal frost layer thaws.
- The monitoring wells will be purged of a minimum of three well bore volumes prior to collecting the water samples. A new, disposable, Teflon® bailer will be used to sample each well. The first bail of water removed from each well will be examined for petroleum odor, sheen, and any other unique physical features.
- Water and vapor samples will be collected in laboratory-supplied sample containers. The samples will be delivered to an ADEC-approved laboratory in accordance with standard chain-of-custody procedures.
- Additional water samples will be collected from the monitoring wells after the well has been purged, as described above, and tested in the field for chemical and physical intrinsic parameters listed in the 2020 Work Plan Schedule shown above.

APPENDIX C

Field Measurements, Notes, and Hydraulic Gradient Plot

Appendix C
Field Measurements and Notes

Project: Speedway Store #5310, aka TNS #112 **Date:** 8/18/2020

Stantec Project Number: 185704928 **Samplers:** Austin Badger and Leslie Petre

Weather: 70's and Sunny

Well ID	Volume Purged (gallons)	Sheen/ Odor	Temp. (°C)	pH	Dissolved Oxygen (mg/l)	ORP (mV)	Specific Conductance (µs/cm)	Top of Casing* (feet)	Depth to Groundwater (feet btoc)	Water Column (feet)	Groundwater Elevation (feet)	Depth to Bottom (feet btoc)
MW-2	5.0	N/N	3.3	7.36	0.31	64.1	729	398.76	8.96	2.54	389.8	11.5 **
MW-3	10.7	Y/Y	5.1	6.46	0.46	15.8	752	398.80	9.05	5.45	389.75	14.5 **
MW-6	2.37	N/N	5.4	7.54	0.1	57.4	450	401.37	12.32	4.83	389.05	17.15 **
MW-10	3.15	N/N	4.3	7.71	0.21	53.2	339	401.52	12.87	6.53	388.65	19.28
MW17-2	3.12	N/N	6	7.1	0.25	0.4	931	398.28	8.45	6.35	389.83	14.80 **
MW17-5	2.19	N/N	4.3	6.56	0.34	47.8	495	398.60	8.78	4.47	389.82	13.25 **

NC - Not Calculated
NM - Not Measured
NP - Not Purged

* Based on a vertical control survey of September 5, 2017, using an arbitrary datum, for MW-2, MW-3, MW-6, and MW-10. Vertical control survey for MW 17-2 and MW 17-5 was completed July 31, 2019.
** Depths from previous records.

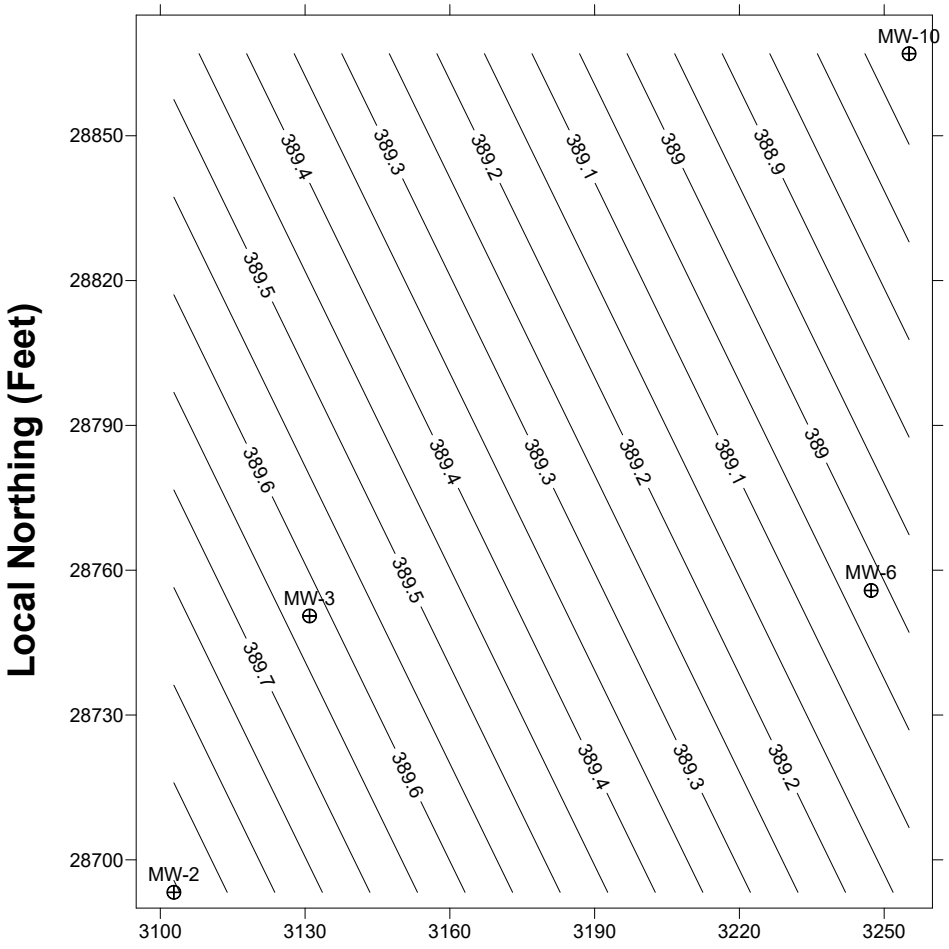
Well ID	Notes	Well Dia.	Sample Time
MW-2	Water Murky, impacted externally with silt	4"	1300
MW-3	Some grit, slight odor with sheen	4"	1555
MW-6	Clear	2"	1145
MW-10	Clear	2"	1115
TNS 112 Dup	Of MW-3	--	1555
MW17-2	Murky	2"	1412
MW17-5	Clear	2"	1500

Instruments / methods used		Model
Static water level	Heron	H01L
pH *	YSI Pro Solo	556
Conductivity *	YSI Pro Solo	556
Dissolved Oxygen *	YSI Pro Solo	556
Temperature	YSI Pro Solo	556
ORP *	YSI Pro Solo	556

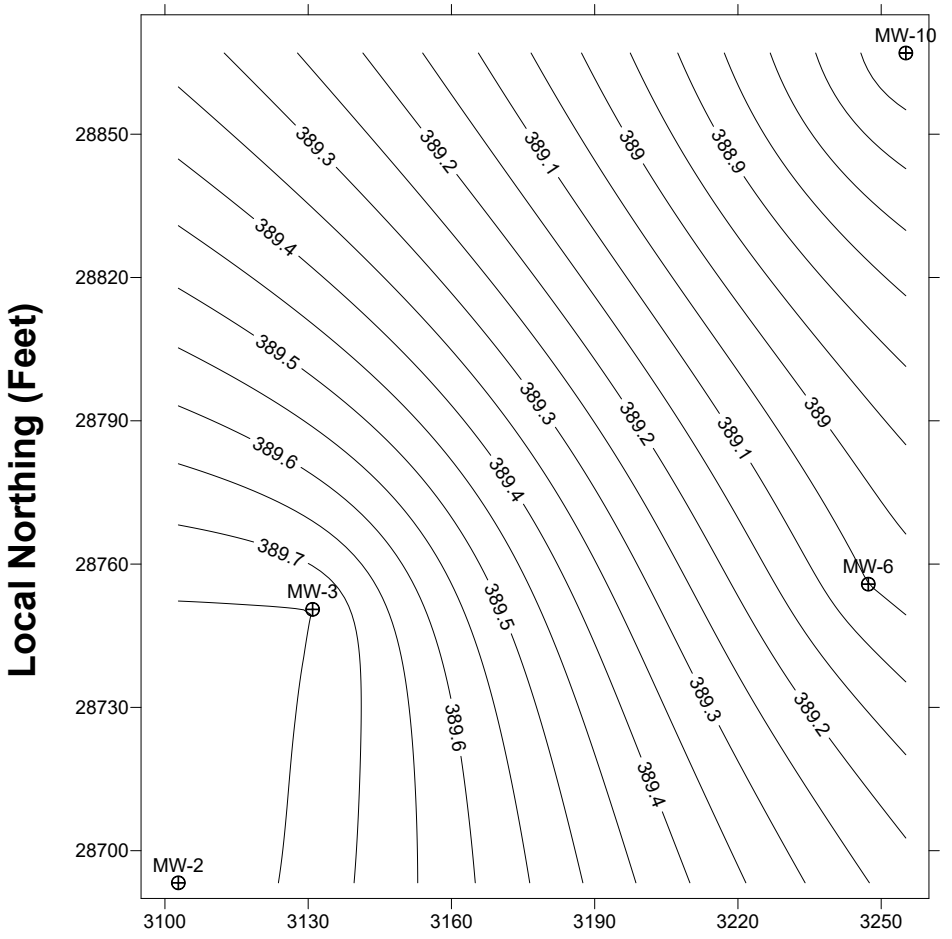
*Calibration in question due to calibration with solution opened in 2019 and because of 2 point pH calibration. Conductivity calibration okay. No ORP calibration.

Lab Analytical Methods:	
VOCs (8260)	ALL
GRO (AK101)	ALL
DRO (AK102)	ALL
Sodium	

Speedway Store #5310 (Former Tesoro 2 Go Mart #112)- Groundwater Elevation Contours August 18, 2020



Polynomial Regression Method
Contour Interval 0.05 feet



Linear Interpolation Method
Contour Interval 0.05 feet

Elevation Datum is locally and arbitrarily established.

APPENDIX D

Tables of Historical Groundwater Monitoring Data

Appendix D
Tables of Historical Groundwater Monitoring Data

Monitoring Well MW-1

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-May-97	**0.310**	**9.00**	**2.30**	**10.0**	**42.0**	**8.5**	88.88
11-Sep-97	**0.571**	**12.60**	**2.00**	**9.37**	**55.0**	**6.05**	89.26
12-Mar-98	**0.220**	**4.90**	**1.30**	**6.0**	**37**	**5.1**	88.92
21-Jul-98	**0.143**	**4.29**	**0.84**	**3.92**	**22**	**7.59**	89.51
12-Oct-98	**0.277**	**4.36**	**0.458**	**1.929**	**16**	**5.98**	87.78
21-Jan-99	**0.036**	**1.08**	**0.24**	**1.208**	**6.8**	**2.46**	88.80
31-Mar-99	**0.015**	0.297	**0.151**	**0.703**	**3.3**	0.686	88.28
28-Jul-99	**0.087**	**10.80**	**1.96**	**9.38**	**46**	**3.89**	89.14
15-Oct-99	**0.174**	**2.97**	**0.503**	**2.334**	**15**	**3.74**	88.91
10-Mar-00	**0.0216**	0.718	**0.161**	**0.783**	**4.7**	0.81	88.52
21-Jun-00	**0.0220**	0.931	**0.284**	**1.321**	**7.6**	1.03	89.32
21-Sep-00	**0.0329**	0.471	**0.160**	**0.736**	**5.0**	**1.61**	89.26
25-Jan-01	**0.0170**	0.322	**0.110**	**0.523**	**3.69**	0.644	88.90
19-Apr-01	**0.0123**	0.097	**0.046**	**0.221**	**1.48**	0.920	88.87
24-Jul-01	**0.0119**	0.209	**0.104**	**0.409**	**2.07**	0.628	89.25
28-Jan-02	**0.1200**	**2.070**	**0.604**	**2.841**	**10.8**	0.778	89.16
30-Apr-02	**5.020**	**9.480**	**0.284**	**3.470**	**32.2**	**2.1**	89.65
30-Sep-02	**0.659**	0.209	**0.0551**	**0.736**	**3.87**	1.11	89.72
12-May-03	**0.538**	**3.14**	**0.814**	**20.42**	**44.5**	**4.84**	89.70
09-Oct-03	0.00437	0.00571	0.00189	0.0998	0.697	U (0.32)	389.08
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	U (0.0005)	0.000709	U (0.0005)	0.00984	U (0.05)	U (0.5)	388.75
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	**0.00544**	0.00284	0.00585	**1.46**	**3.52**	**2.41**	388.32
19-May-05	0.000943	0.00248	0.00272	0.0211	0.0709	0.48	389.26
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	NT	NT	NT	NT	NT	NT	NM
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.413)	388.45
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	0.00088	U (0.0005)	U (0.0015)	U (0.05)	0.862	388.52
01-Oct-08	NT	NT	NT	NT	NT	NT	389.28
12-May-09	U (0.0005)	0.00427	0.00077	0.00586	U (0.05)	**1.77**	389.20
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	0.00134	0.0297	**0.0357**	**0.249**	0.849	U (0.420)	389.00
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	U (0.0005)	0.00056	0.00479	0.0377	0.0857	0.652	389.11
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	0.000701	0.00284	**0.0765**	**0.407**	1.41	U (0.410)	388.89
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	0.000845	U (0.0005)	**0.125**	**0.455**	1.21	0.587	389.20
25-Sep-13	NT	NT	NT	NT	NT	NT	389.30
06-May-14	U (0.0005)	U (0.0005)	0.0021	0.011	U (0.05)	0.64	389.34
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	U (0.001)	0.0044	0.0045	0.031	0.21	**2.3**	389.72
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	0.00055	0.0026	0.0053	0.029	U (0.1)	U (0.40)	389.18
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	U (0.002)	U (0.002)	**0.034**	**0.285**	U (10)	**1.5**	389.46
05-Sep-17	NT	NT	NT	NT	NT	NT	NM
14-Jun-18	U (0.003)	0.0021	0.0086	0.071	0.028	0.43	389.56
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	U (0.003)	U (0.002)	U (0.003)	0.0034	U (0.25)	0.42	388.94
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-2

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-May-97	**92**	**64**	**7.1**	**33**	**170**	**8.2**	88.86
11-Sep-97	NT	NT	NT	NT	NT	NT	89.26
12-Mar-98	**2.8**	**44**	**13**	**62**	**420**	**21**	88.90
21-Jul-98	NT	NT	NT	NT	NT	NT	89.51
12-Oct-98	NT	NT	NT	NT	NT	NT	89.11
21-Jan-99	NT	NT	NT	NT	NT	NT	NM
31-Mar-99	NT	NT	NT	NT	NT	NT	89.60
28-Jul-99	NT	NT	NT	NT	NT	NT	89.59
15-Oct-99	NT	NT	NT	NT	NT	NT	89.26
10-Mar-00	NT	NT	NT	NT	NT	NT	89.46
21-Jun-00	NT	NT	NT	NT	NT	NT	NM
21-Sep-00	NT	NT	NT	NT	NT	NT	89.32
25-Jan-01	NT	NT	NT	NT	NT	NT	88.92
19-Apr-01	**2.93**	**52.9**	**9.9**	**44.5**	**216**	**27.4**	88.85
24-Jul-01	**1.95**	**30.5**	**5.3**	**33.9**	**136**	**18.5**	89.24
28-Jan-02	**1.23**	**33.4**	**7.38**	**39.8**	**156**	**10.5**	89.14
30-Apr-02	**0.116**	**10.2**	**2.60**	**17.43**	**51.4**	**6.9**	89.66
30-Sep-02	**0.656**	**17.9**	**2.92**	**26.61**	**118**	**6.93**	89.29
12-May-03	**0.569**	**19.7**	**4.15**	**25.43**	**90.8**	**5.68**	89.74
09-Oct-03	**0.25**	**6.21**	**2.88**	**14.2**	**64.9**	U (0.32)	389.00
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	U (0.005)	0.116	**0.114**	**1.21**	**5.42**	**7**	388.73
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	**0.00518**	0.0824	**0.109**	**0.699**	**3.2**	**1.74**	388.03
19-May-05	**0.00681**	0.513	**0.376**	**1.61**	**7.88**	**5.49**	389.21
26-Sep-05	**0.0125**	0.58	**0.422**	**1.78**	**9.6**	**3.15**	388.93
15-May-06	0.00058	0.0273	**0.0533**	**0.223**	**1.5**	**1.87**	388.80
07-Nov-06	**0.0102**	**1.11**	**0.906**	**3.24**	**17**	1.35	388.64
15-May-07	0.00279	0.0199	**0.0356**	0.173	**1.99**	**1.9**	388.15
16-Oct-07	0.0032	0.173	**0.412**	1.03	**7.61**	**1.55**	388.15
29-Apr-08	U (0.0005)	U (0.0005)	0.0043	0.0131	0.453	**2.09**	388.82
01-Oct-08	0.00114	0.0194	**0.228**	**0.739**	**3.12**	1.38	389.24
12-May-09	0.00385	0.0114	**0.308**	**0.537**	**4.0**	**8.79**	389.14
26-Oct-09	0.00138	0.0108	**0.717**	**1.48**	**4.25**	0.738	388.76
15-Jun-10	0.00143	0.00135	**0.0205**	0.0729	1.32	0.510	388.99
14-Oct-10	0.00192	0.0136	**0.127**	**0.700**	**4.45**	1.49	388.66
24-May-11	0.00232	0.0313	**0.798**	**1.320**	**6.24**	**3.04**	388.96
26-Oct-11	U (0.010)	U (0.010)	**0.345**	**1.110**	**6.53**	0.744	388.59
22-May-12	**0.00566**	0.00275	**0.179**	**0.503**	**5.17**	NR	388.88
24-Jul-12	NT	NT	NT	NT	NT	U (0.410)	NM
11-Oct-12	0.000750	0.0197	0.00707	0.0614	0.687	0.655	389.13
21-May-13	0.001730	0.000638	**0.0190**	0.0325	0.388	U (0.397)	389.20
25-Sep-13	0.001300	0.00104	**0.269**	**0.481**	**2.61**	0.573	389.27
06-May-14	0.003800	U (0.0005)	**0.150**	**0.210**	1.80	0.670	389.28
17-Sep-14	0.000720	0.00068	**0.096**	0.150	1.30	U (0.38)	388.88
26-May-15	0.0018	U (0.003)	**0.092**	**0.21**	1.6	**2.5**	389.53
06-Oct-15	**0.036**	0.0039	**0.290**	**0.640**	**4.7**	0.76	389.86
11-May-16	0.0023	U (0.001)	**0.10**	0.14	1.2	0.73	389.13
05-Oct-16	U (0.020)	U (0.020)	**0.15**	**0.22**	1.7	1.4	389.51
08-May-17	U (0.002)	U (0.002)	**0.23**	**0.639**	**2.8**	0.68	389.42
05-Sep-17	0.0014	U (0.001)	**0.041**	0.081	1.000	0.9	389.34
14-Jun-18	U (0.003)	U (0.002)	**0.077**	0.1128	1.1	0.3	389.52
30-Oct-18	U (0.003)	U (0.002)	**0.042**	0.062	0.69	**2.4**	389.22
09-May-19	U (0.003)	U (0.002)	**0.023**	0.051	0.41	0.26	388.88
22-Oct-19	U (0.003)	U (0.002)	**0.017**	0.029	0.36	0.72	389.44
18-Aug-20	0.000740	J (0.000886)	0.00728	0.0156	0.203	0.632	389.8
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-3

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-May-97	**23**	**69**	**12**	**54**	**380**	**54**	88.79
11-Sep-97	NT	NT	NT	NT	NT	NT	89.2
12-Mar-98	NT	NT	NT	NT	NT	NT	88.84
21-Jul-98	NT	NT	NT	NT	NT	NT	89.45
12-Oct-98	NT	NT	NT	NT	NT	NT	88.39
21-Jan-99	NT	NT	NT	NT	NT	NT	NM
31-Mar-99	NT	NT	NT	NT	NT	NT	NM
28-Jul-99	NT	NT	NT	NT	NT	NT	88.54
15-Oct-99	NT	NT	NT	NT	NT	NT	88.10
10-Mar-00	NT	NT	NT	NT	NT	NT	88.36
21-Jun-00	NT	NT	NT	NT	NT	NT	NM
21-Sep-00	NT	NT	NT	NT	NT	NT	89.16
25-Jan-01	NT	NT	NT	NT	NT	NT	88.83
19-Apr-01	NT	NT	NT	NT	NT	NT	NM
24-Jul-01	NT	NT	NT	NT	NT	NT	89.18
28-Jan-02	NT	NT	NT	NT	NT	NT	89.09
30-Apr-02	NT	NT	NT	NT	NT	NT	89.61
30-Sep-02	**36.6**	**75.3**	**3.87**	**40.3**	**337**	**7.38**	89.15
12-May-03	**5.41**	**6.45**	**1.44**	**7.86**	**36.6**	**2.37**	89.68
09-Oct-03	**13.6**	**52.3**	**5.31**	**49.9**	**392**	U (0.32)	388.92
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	**0.617**	**1.47**	**0.722**	**5.69**	**20.2**	**1.9**	389.34
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	**9.38**	**29.5**	**3.68**	**24.3**	**157**	**4.96**	388.26
19-May-05	**0.846**	**5.38**	**1.04**	**8.9**	**37.3**	**2.03**	389.41
26-Sep-05	**0.0496**	**1.27**	**0.261**	**4.24**	**14.6**	**3.15**	389.12
15-May-06	**0.833**	**5.05**	**1.63**	**12.5**	**44.3**	**4.44**	388.90
07-Nov-06	**1.74**	**26.4**	**3.74**	**31.4**	**174**	**4.68**	388.87
15-May-07	**0.0124**	0.136	**0.0942**	**0.948**	**3.93**	**2.49**	388.37
16-Oct-07	**0.126**	**2.3**	**0.272**	**17.5**	**55.3**	**7.82**	387.31
29-Apr-08	**0.0063**	0.143	**0.0197**	**0.321**	**1.44**	**4.71**	388.74
01-Oct-08	0.00305	0.0238	**0.0572**	**0.913**	**2.4**	**3.2**	389.36
12-May-09	**0.056**	0.833	**0.624**	**5.7**	**17.2**	**5.95**	389.26
26-Oct-09	**0.0903**	**2.25**	**0.935**	**13.6**	**51.5**	**3.41**	388.70
15-Jun-10	**0.0428**	0.377	**0.449**	**4.2**	**12.8**	**2.86**	388.90
14-Oct-10	**0.113**	**9.24**	**2.48**	**25.6**	**137**	**7.56**	388.28
24-May-11	**0.205**	**2.53**	**1.31**	**20.9**	**62.4**	**7.72**	388.85
26-Oct-11	**0.104**	**2.09**	**1.39**	**20.7**	**47.0**	**12.0**	388.56
22-May-12	**0.131**	**1.99**	**0.751**	**12.9**	**41.3**	**5.22**	388.82
11-Oct-12	**0.0102**	0.373	**0.271**	**3.83**	**23.2**	1.35	389.05
21-May-13	**1.50**	**11.2**	**2.39**	**15.9**	**70.0**	**20.3**	389.13
25-Sep-13	**0.102**	**4.01**	**1.93**	**23.9**	**47.9**	**7.15**	389.18
06-May-14	**0.037**	0.470	**0.420**	**3.8**	**12.0**	**4.70**	389.10
17-Sep-14	**0.047**	**1.5**	**1.200**	**14.0**	**26.0**	**2.70**	388.75
26-May-15	**0.057**	**2.0**	**1.6**	**13.0**	**79.0**	**4.6**	389.50
06-Oct-15	**0.10**	**2.1**	**1.5**	**16.0**	**57.0**	**2.2**	389.77
11-May-16	0.00093	0.024	**0.034**	**0.34**	1.1	**1.6**	389.07
05-Oct-16	**0.054**	0.61	**0.92**	**7.9**	**21**	**2.5**	389.44
08-May-17	**0.021**	0.32	**0.63**	**6.6**	**19**	**4.4**	389.37
05-Sep-17	**0.040**	0.750	**1.000**	**12.000**	**30.000**	**2.000**	389.25
14-Jun-18	**0.027**	0.67	**1.1**	**11.6**	**U (25)**	**2.8**	389.44
30-Oct-18	**0.036**	0.37	**1.2**	**12**	**39**	**5.7**	389.14
10-May-19	**0.029**	0.200	**0.380**	**4.02**	**10**	0.66	388.84
22-Oct-19	**0.028**	0.150	**0.750**	**5.5**	**17**	**3.7 H**	389.42
18-Aug-20	**0.0244**	**0.194**	**0.637**	**6.86**	**12.6**	**2.84**	389.75
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-4

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-May-97	**0.85**	0.71	**0.160**	**0.64**	**3.8**	0.55	88.79
11-Sep-97	**8.41**	**14.5**	**1.150**	**5.57**	**64**	**1.71**	89.2
12-Mar-98	**2.30**	**3.3**	**0.420**	**1.80**	**15**	0.68	88.84
21-Jul-98	**3.71**	**3.69**	**0.485**	**2.09**	**21**	0.7	89.41
12-Oct-98	**1.95**	**1.99**	**0.360**	**1.58**	**12**	1.29	88.73
21-Jan-99	**0.94**	0.483	**0.127**	**0.579**	**4.3**	0.7	88.75
31-Mar-99	NT	NT	NT	NT	NT	NT	NM
28-Jul-99	**3.48**	**5.6**	**0.390**	**1.86**	**21**	**2.65**	89.03
15-Oct-99	**3.3**	**5.4**	**0.422**	**1.962**	**26**	**3.84**	88.81
10-Mar-00	**1.88**	**2.52**	**0.466**	**2.03**	**14**	**1.91**	88.45
21-Jun-00	**1.44**	**1.78**	**0.201**	**0.923**	**10**	0.660	89.24
21-Sep-00	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	0.838	89.18
25-Jan-01	**0.5330**	0.602	0.397	**1.464**	**7.27**	**1.71**	88.82
19-Apr-01	U (0.0005)	0.015	0.011	0.066	0.225	U(0.8)	88.78
24-Jul-01	0.001	U (0.002)	U (0.002)	U (0.002)	U (0.09)	0.869	89.17
28-Jan-02	**0.2710**	0.802	**0.631**	**2.646**	**9.580**	0.708	89.06
30-Apr-02	**0.0644**	U (0.002)	**0.509**	0.128	0.623	U (0.495)	89.66
30-Sep-02	**0.0157**	U (0.002)	0.00523	0.0114	0.0943	U (0.5)	89.22
12-May-03	**0.0138**	0.00268	0.00595	0.05252	0.167	U (0.3)	89.69
09-Oct-03	**0.0311**	U (0.0005)	0.00555	0.0657	0.266	**2.95**	388.92
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	0.00295	U (0.0005)	0.00506	0.113	0.311	U (0.5)	388.65
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	**0.0121**	U (0.0005)	U (0.0005)	0.00791	0.0646	0.455	387.82
19-May-05	0.00295	U (0.0005)	U (0.0005)	0.0167	0.067	U (0.391)	389.16
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	0.000635	U (0.0005)	U (0.0005)	0.00919	0.051	U (0.403)	388.63
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.782	387.97
16-Oct-07	NT	NT	NT	NT	NT	NT	386.87
29-Apr-08	0.00175	0.00338	0.00097	**1.2**	**1.75**	**3.78**	388.88
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	0.00121	U (0.0005)	0.00189	U (0.05)	U (0.427)	388.98
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.00976)	U (0.05)	U (0.410)	388.93
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	388.87
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	388.82
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	389.13
25-Sep-13	NT	NT	NT	NT	NT	NT	389.19
06-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	389.23
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	U (0.001)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	0.23	389.50
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	U (0.0020)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.40)	389.09
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (1)	0.14	389.41
05-Sep-17	NT	NT	NT	NT	NT	NT	NM
14-Jun-18	U (0.003)	U (0.002)	U (0.003)	U (0.002)	U (0.000054)	U (0.25)	389.49
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	0.51	393.87
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-5

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
12-Oct-98	**0.019**	U	U	0.002	0.045	0.110	85.78
21-Jan-99	**0.051**	U	U	U	0.110	0.127	86.04
31-Mar-99	**0.023**	U (0.001)	U (0.001)	0.0013	U (0.09)	U (0.297)	86.56
28-Jul-99	**0.008**	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.300)	88.23
15-Oct-99	**0.040**	U (0.002)	U (0.002)	U (0.002)	0.11	U (0.297)	88.17
10-Mar-00	**0.104**	0.003	U (0.002)	0.005	0.22	U (0.297)	88.17
21-Jun-00	**0.025**	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.297)	88.67
21-Sep-00	**0.025**	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.303)	88.39
25-Jan-01	**0.066**	0.003	0.002	0.007	0.19	U (0.300)	88.15
19-Apr-01	U(0.0005)	0.002	0.003	0.003	U (0.09)	U(0.816)	88.06
24-Jul-01	U(0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.495)	88.37
28-Jan-02	0.0029	U (0.002)	U (0.002)	0.002	U (0.09)	U (0.521)	88.28
30-Apr-02	U(0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.500)	88.85
30-Sep-02	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.5)	88.00
12-May-03	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.3)	87.94
09-Oct-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.32)	388.19
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	387.86
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	U (0.0002)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.4)	387.72
19-May-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	388.12
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	387.69
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	0.00154	U (0.05)	0.522	387.46
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.435)	387.92
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.450)	388.21
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	NT	NT	NT	NT	NT	NT	NM
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	NT	NT	NT	NT	NT	NT	NM
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	NT	NT	NT	NT	NT	NT	NM
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	NT	NT	NT	NT	NT	NT	NM
25-Sep-13	NT	NT	NT	NT	NT	NT	NM
06-May-14	NT	NT	NT	NT	NT	NT	NM
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	NT	NT	NT	NT	NT	NT	NM
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	NT	NT	NT	NT	NT	NT	NM
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	NT	NT	NT	NT	NT	NT	NM
05-Sep-17	NT	NT	NT	NT	NT	NT	NM
14-Jun-18	NT	NT	NT	NT	NT	NT	NM
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	NT	NT	NT	NT	NT	NT	NM
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-6

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
21-Jun-00	0.0012	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.3)	88.51
21-Sep-00	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.297)	88.47
25-Jan-01	0.00051	0.0026	U (0.002)	0.003	U (0.09)	U (0.3)	88.22
19-Apr-01	U (0.0005)	U (0.002)	U (0.002)	0.003	U (0.09)	U(0.808)	88.17
24-Jul-01	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.495)	88.48
28-Jan-02	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.500)	88.43
30-Apr-02	0.000565	0.00411	0.00203	0.01081	U (0.09)	U (0.500)	88.77
30-Sep-02	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.495)	88.40
12-May-03	U (0.0005)	U (0.002)	U (0.002)	U (0.002)	U (0.09)	U (0.3)	88.13
09-Oct-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.32)	388.30
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	387.99
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	U (0.0002)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.4)	387.21
19-May-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	388.24
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.397)	387.96
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	387.44
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.481)	388.23
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.400)	388.52
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.00976)	U (0.05)	U (0.431)	NM
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.385)	388.26
26-Oct-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	388.12
22-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	388.26
11-Oct-12	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.403)	388.44
21-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	388.48
25-Sep-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.385)	388.63
06-May-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.42)	388.59
17-Sep-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0005)	U (0.05)	U (0.39)	389.46
26-May-15	U (0.001)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.21)	389.20
06-Oct-15	U (0.001)	U (0.001)	U (0.001)	U (0.003)	U (0.01)	0.84	388.99
11-May-16	U (0.0020)	U (0.0020)	U (0.0020)	U (0.0020)	U (0.0020)	U (0.0020)	388.41
05-Oct-16	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.05)	U (0.12)	388.70
08-May-17	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (1)	U (0.11)	388.70
05-Sep-17	U (0004)	U (0.001)	U (0.001)	U (0.003)	U (0.150)	U (0.290)	388.64
14-Jun-18	U (0.003)	U (0.002)	U (0.003)	U (0.002)	U (025)	U (0.12)	388.77
30-Oct-18	U (0.003)	U (0.002)	U (0.003)	0.0084	U (0.25)	U (0.12)	388.53
09-May-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	388.30
22-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	388.72
18-Aug-20	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0500)	J (0.210)	389.05
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-7

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Oct-03	**0.0237**	0.00185	0.014	0.0877	**2.36**	U (0.32)	389.10
16-Mar-04	NT	NT	NT	NT	NT	NT	NM
21-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	388.83
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	0.00325	U (0.0005)	0.000934	0.00498	0.298	0.508	388.25
19-May-05	0.000909	U (0.0005)	0.000527	U (0.0015)	0.275	U (0.391)	389.29
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	0.109	0.412	388.70
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	NT	NT	NT	NT	NT	NT	NM
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.413)	388.88
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	U (0.0005)	0.00063	0.00231	1.16	U (0.442)	389.18
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	NT	NT	NT	NT	NT	NT	NM
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	NT	NT	NT	NT	NT	NT	NM
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	NT	NT	NT	NT	NT	NT	NM
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	NT	NT	NT	NT	NT	NT	NM
25-Sep-13	NT	NT	NT	NT	NT	NT	NM
06-May-14	NT	NT	NT	NT	NT	NT	NM
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	NT	NT	NT	NT	NT	NT	NM
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	NT	NT	NT	NT	NT	NT	NM
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	NT	NT	NT	NT	NT	NT	NM
05-Sep-17	NT	NT	NT	NT	NT	NT	NM
14-Jun-18	NT	NT	NT	NT	NT	NT	NM
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	NT	NT	NT	NT	NT	NT	NM
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-8

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Oct-03	NT	NT	NT	NT	NT	NT	NM
16-Mar-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.37)	388.69
21-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	388.79
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	0.000298	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.4)	388.30
19-May-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	389.26
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	388.73
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.394)	388.41
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	388.87
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	0.00062	0.00067	0.00199	U (0.05)	U (0.413)	389.22
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	NT	NT	NT	NT	NT	NT	NM
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	NT	NT	NT	NT	NT	NT	NM
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	NT	NT	NT	NT	NT	NT	NM
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	NT	NT	NT	NT	NT	NT	NM
25-Sep-13	NT	NT	NT	NT	NT	NT	NM
06-May-14	NT	NT	NT	NT	NT	NT	NM
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	NT	NT	NT	NT	NT	NT	NM
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	NT	NT	NT	NT	NT	NT	NM
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	NT	NT	NT	NT	NT	NT	NM
9/5/2017	NT	NT	NT	NT	NT	NT	NM
6/14/2018	NT	NT	NT	NT	NT	NT	NM
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	NT	NT	NT	NT	NT	NT	NM
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well MW-9

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Oct-03	NT	NT	NT	NT	NT	NT	NM
16-Mar-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.37)	388.27
21-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	388.88
17-Sep-04	NT	NT	NT	NT	NT	NT	NM
21-Oct-04	U (0.0002)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	U (0.4)	388.22
19-May-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	389.41
26-Sep-05	NT	NT	NT	NT	NT	NT	NM
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	388.83
07-Nov-06	NT	NT	NT	NT	NT	NT	NM
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	388.33
16-Oct-07	NT	NT	NT	NT	NT	NT	NM
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	388.94
01-Oct-08	NT	NT	NT	NT	NT	NT	NM
12-May-09	U (0.0005)	U (0.0005)	U (0.0005)	0.00182	U (0.05)	U (0.400)	389.33
26-Oct-09	NT	NT	NT	NT	NT	NT	NM
15-Jun-10	NT	NT	NT	NT	NT	NT	NM
14-Oct-10	NT	NT	NT	NT	NT	NT	NM
24-May-11	NT	NT	NT	NT	NT	NT	NM
26-Oct-11	NT	NT	NT	NT	NT	NT	NM
22-May-12	NT	NT	NT	NT	NT	NT	NM
11-Oct-12	NT	NT	NT	NT	NT	NT	NM
21-May-13	NT	NT	NT	NT	NT	NT	NM
25-Sep-13	NT	NT	NT	NT	NT	NT	NM
06-May-14	NT	NT	NT	NT	NT	NT	NM
17-Sep-14	NT	NT	NT	NT	NT	NT	NM
26-May-15	NT	NT	NT	NT	NT	NT	NM
06-Oct-15	NT	NT	NT	NT	NT	NT	NM
11-May-16	NT	NT	NT	NT	NT	NT	NM
05-Oct-16	NT	NT	NT	NT	NT	NT	NM
08-May-17	NT	NT	NT	NT	NT	NT	NM
05-Sep-17	NT	NT	NT	NT	NT	NT	NM
14-Jun-18	NT	NT	NT	NT	NT	NT	NM
30-Oct-18	NT	NT	NT	NT	NT	NT	NM
09-May-19	NT	NT	NT	NT	NT	NT	NM
22-Oct-19	NT	NT	NT	NT	NT	NT	NM
18-Aug-20	NT	NT	NT	NT	NT	NT	NM
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Appendix D
Tables of Historical Groundwater Monitoring Data

Monitoring Well MW-10

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Oct-03	NT	NT	NT	NT	NT	NT	NM
17-Sep-04	**0.0103**	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.385)	NM
21-Oct-04	U (0.0002)	U (0.0005)	U (0.0005)	U (0.001)	U (0.05)	**2.19**	387.01
19-May-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	387.92
26-Sep-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.397)	387.87
15-May-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	387.69
07-Nov-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.442)	387.72
15-May-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	387.31
16-Oct-07	U (0.0005)	0.000745	U (0.0005)	0.00843	U (0.05)	U (0.427)	387.31
29-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.424)	387.79
01-Oct-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.49)	388.12
12-May-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	388.04
26-Oct-09	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.417)	387.77
15-Jun-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.00976)	U (0.05)	U (0.417)	387.95
14-Oct-10	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.397)	387.82
24-May-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	387.92
26-Oct-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	387.79
22-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	387.87
11-Oct-12	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.413)	388.03
21-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	388.09
25-Sep-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	388.21
06-May-14	U (0.0005)	U (0.0005)	U (0.0005)	0.0027	U (0.05)	U (0.41)	388.19
17-Sep-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	389.21
26-May-15	U (0.001)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.22)	388.95
06-Oct-15	U (0.001)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	0.41	388.59
11-May-16	U (0.0020)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.42)	388.07
05-Oct-16	U (0.0020)	U (0.002)	U (0.003)	U (0.002)	U (0.05)	**2.6**	388.42
08-May-17	U (0.002)	U (0.002)	U (0.003)	0.0056	U (1)	U (0.11)	388.32
05-Sep-17	U (.0004)	U (0.001)	U (0.001)	U (0.003)	U (0.150)	U (0.280)	388.28
14-Jun-18	U (0.003)	U (0.002)	U (0.003)	U (0.002)	U (0.25)	U (0.12)	388.37
30-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	388.19
09-May-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	388.01
22-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	388.37
18-Aug-20	U (0.0002)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.050)	J (0.283)	388.65
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Monitoring Well 17-2

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-Oct-18	U (0.003)	U (0.002)	**0.18**	**0.9**	**3.9**	**2.5**	NM
10-May-19	U (0.003)	U (0.002)	0.0051	0.012	U (0.25)	0.91	NM
22-Oct-19	U (0.003)	U (0.002)	**0.210**	**0.790**	**3.5**	1.4 H	389.50
18-Aug-20	J (0.0017)	J(0.00186)	**0.084**	**0.320**	1.76	**1.96**	389.83
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Appendix D
Tables of Historical Groundwater Monitoring Data

Monitoring Well 17-5

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
14-Jun-18	**0.025**	0.52	**0.064**	**0.548**	1.7	0.17	NM
30-Oct-18	**0.055**	0.21	**0.15**	**0.505**	**3.7**	0.26	NM
09-May-19	0.0032	0.0026	**0.016**	0.048	0.31	0.92	NM
22-Oct-19	**0.022**	0.360	**0.230**	**0.721**	**3.7**	0.47 H	389.47
18-Aug-20	**0.0308**	0.386	**0.151**	**0.896**	**2.68**	0.825	389.82
GCLs	**0.0046**	**1.1**	**0.015**	**0.19**	**2.2**	**1.5**	NA

Key:
DRO - diesel range organics
GCL - ground water cleanup levels
GRO - gasoline range organics
GW Elev - ground water elevation
H - Sample was preppred or analyzed beyond the specified holding time
mg/L - milligrams per liter
NA - not applicable
NM - not measured
NR - Reported as an unreliable result by the laboratory.
NT - not tested
U - Undetected above practical quantitation limits.

Analytical data for the June 2010 Monitoring Event may have an associated low bias for some samples. See ADEC laboratory QC checklist for impacted analytes.

Bold, shade indicates concentration exceeds the GCL.

APPENDIX E

Laboratory Analytical Report and ADEC Laboratory Data Review Checklist

Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 E Fireweed Ln #200
Anchorage, AK 99503
(907)227-9883

Report Number: **1209586**

Client Project: **Store 112 Remediation**

Dear Bob Gilfilian,

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.

Stephen C. Ede
2020.09.08
17:00:41 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1209586**
Project Name/Site: **Store 112 Remediation**
Project Contact: **Bob Gilfilian**

Refer to sample receipt form for information on sample condition.

MW-3 (1209586006) PS

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria due to matrix interference.

Dup (1209586007) PS

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria due to matrix interference.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8260D				
1209586003	MW-2	VMS20239	n-Butylbenzene	SP
1209586004	MW-17-2	VMS20239	4-Isopropyltoluene	SP
1209586004	MW-17-2	VMS20239	n-Butylbenzene	SP
1209586005	MW-17-5	VMS20236	4-Isopropyltoluene	SP
1209586005	MW-17-5	VMS20236	n-Butylbenzene	SP
1209586006	MW-3	VMS20236	4-Isopropyltoluene	SP
1209586007	Dup	VMS20236	4-Isopropyltoluene	SP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

Print Date: 09/08/2020 4:05:36PM

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, indenmification 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 & 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 SGS QAP and, when applicable, other regulatory authorities.

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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW-10	1209586001	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
MW-6	1209586002	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
MW-2	1209586003	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
MW-17-2	1209586004	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
MW-17-5	1209586005	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
MW-3	1209586006	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
Dup	1209586007	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)
Trip Blank	1209586008	08/18/2020	08/21/2020	Water (Surface, Eff., Ground)

Method	Method Description
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
EP200.8	Metals in Water by 200.8 ICP-MS
SW8260D	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **MW-10**
Lab Sample ID: 1209586001
Semivolatile Organic Fuels

Parameter	Result	Units
Diesel Range Organics	0.283J	mg/L

Client Sample ID: **MW-6**
Lab Sample ID: 1209586002
Semivolatile Organic Fuels

Parameter	Result	Units
Diesel Range Organics	0.216J	mg/L

Client Sample ID: **MW-2**
Lab Sample ID: 1209586003
Semivolatile Organic Fuels
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Diesel Range Organics	0.632	mg/L
Gasoline Range Organics	0.203	mg/L
1,2,4-Trimethylbenzene	6.42	ug/L
1,3,5-Trimethylbenzene	6.97	ug/L
4-Isopropyltoluene	1.05	ug/L
Benzene	0.740	ug/L
Ethylbenzene	7.28	ug/L
Isopropylbenzene (Cumene)	2.28	ug/L
Naphthalene	0.779J	ug/L
n-Butylbenzene	0.627J	ug/L
n-Propylbenzene	4.78	ug/L
o-Xylene	0.669J	ug/L
P & M -Xylene	15.0	ug/L
sec-Butylbenzene	0.901J	ug/L
Toluene	0.886J	ug/L
Trichlorofluoromethane	15.4	ug/L
Xylenes (total)	15.6	ug/L

Client Sample ID: **MW-17-2**
Lab Sample ID: 1209586004
Metals by ICP/MS
Semivolatile Organic Fuels
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Sodium	41600	ug/L
Diesel Range Organics	1.96	mg/L
Gasoline Range Organics	1.76	mg/L
1,2,4-Trimethylbenzene	457	ug/L
1,3,5-Trimethylbenzene	88.0	ug/L
4-Isopropyltoluene	5.08	ug/L
Benzene	1.70J	ug/L
Ethylbenzene	83.7	ug/L
Isopropylbenzene (Cumene)	21.9	ug/L
Naphthalene	8.05	ug/L
n-Butylbenzene	4.45J	ug/L
n-Propylbenzene	40.5	ug/L
o-Xylene	21.4	ug/L
P & M -Xylene	299	ug/L
sec-Butylbenzene	4.83J	ug/L
Toluene	1.86J	ug/L
Trichlorofluoromethane	22.1	ug/L
Xylenes (total)	320	ug/L

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Detectable Results Summary

Client Sample ID: **MW-17-5**
Lab Sample ID: 1209586005

Metals by ICP/MS
Semivolatile Organic Fuels
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Sodium	12400	ug/L
Diesel Range Organics	0.825	mg/L
Gasoline Range Organics	2.68	mg/L
1,2,4-Trimethylbenzene	190	ug/L
1,3,5-Trimethylbenzene	117	ug/L
4-Isopropyltoluene	1.83	ug/L
Benzene	30.8	ug/L
Ethylbenzene	151	ug/L
Isopropylbenzene (Cumene)	24.7	ug/L
Naphthalene	7.29	ug/L
n-Butylbenzene	2.53	ug/L
n-Propylbenzene	49.2	ug/L
o-Xylene	109	ug/L
P & M -Xylene	524	ug/L
sec-Butylbenzene	3.35	ug/L
Toluene	386	ug/L
Trichlorofluoromethane	15.0J	ug/L
Xylenes (total)	896	ug/L

Client Sample ID: **MW-3**
Lab Sample ID: 1209586006

Metals by ICP/MS
Semivolatile Organic Fuels
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Sodium	28800	ug/L
Diesel Range Organics	2.84	mg/L
Gasoline Range Organics	12.6	mg/L
1,2,4-Trimethylbenzene	2260	ug/L
1,3,5-Trimethylbenzene	633	ug/L
4-Isopropyltoluene	13.0J	ug/L
Benzene	24.4	ug/L
Ethylbenzene	637	ug/L
Isopropylbenzene (Cumene)	82.0	ug/L
Naphthalene	34.8	ug/L
n-Propylbenzene	161	ug/L
o-Xylene	1840	ug/L
P & M -Xylene	5020	ug/L
sec-Butylbenzene	10.5J	ug/L
Toluene	194	ug/L
Xylenes (total)	6860	ug/L

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Detectable Results Summary

Client Sample ID: **Dup**
Lab Sample ID: 1209586007

Semivolatile Organic Fuels
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Diesel Range Organics	3.41	mg/L
Gasoline Range Organics	12.3	mg/L
1,2,4-Trimethylbenzene	2200	ug/L
1,3,5-Trimethylbenzene	625	ug/L
4-Isopropyltoluene	13.4J	ug/L
Benzene	22.6	ug/L
Ethylbenzene	615	ug/L
Isopropylbenzene (Cumene)	79.3	ug/L
Naphthalene	35.6	ug/L
n-Propylbenzene	157	ug/L
o-Xylene	1730	ug/L
P & M -Xylene	4810	ug/L
sec-Butylbenzene	9.92J	ug/L
Toluene	176	ug/L
Xylenes (total)	6530	ug/L

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Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586001
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.283	J	0.630	0.189	mg/L	1		09/01/20 17:51
Surrogates								
5a Androstane (surr)	93		50-150		%	1		09/01/20 17:51

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 17:51
Container ID: 1209586001-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 238 mL
Prep Extract Vol: 1 mL

Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586001
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/28/20 02:26
Surrogates								
4-Bromofluorobenzene (surr)	78.4		50-150		%	1		08/28/20 02:26

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/28/20 02:26
Container ID: 1209586001-C

Prep Batch: VXX36229
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586001
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
1,1,1-Trichloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,1,2,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
1,1,2-Trichloroethane	0.200 U		0.400	0.120	ug/L	1		08/23/20 17:59
1,1-Dichloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,1-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,1-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2,3-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2,3-Trichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2,4-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2,4-Trimethylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2-Dibromo-3-chloropropane	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
1,2-Dibromoethane	0.0375 U		0.0750	0.0180	ug/L	1		08/23/20 17:59
1,2-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,2-Dichloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
1,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,3,5-Trimethylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,3-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
1,3-Dichloropropane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
1,4-Dichlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
2,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
2-Butanone (MEK)	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
2-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
2-Hexanone	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
4-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
4-Isopropyltoluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
4-Methyl-2-pentanone (MIBK)	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Benzene	0.200 U		0.400	0.120	ug/L	1		08/23/20 17:59
Bromobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Bromochloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Bromodichloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
Bromoform	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Bromomethane	2.50 U		5.00	2.00	ug/L	1		08/23/20 17:59
Carbon disulfide	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Carbon tetrachloride	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Chlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
Chloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59

Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586001
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Chloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 17:59
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Freon-113	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Methylene chloride	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Naphthalene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
o-Xylene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		08/23/20 17:59
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Styrene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Toluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 17:59
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		08/23/20 17:59
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		08/23/20 17:59
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		08/23/20 17:59
Surrogates								
1,2-Dichloroethane-D4 (surr)	100		81-118		%	1		08/23/20 17:59
4-Bromofluorobenzene (surr)	107		85-114		%	1		08/23/20 17:59
Toluene-d8 (surr)	104		89-112		%	1		08/23/20 17:59

Results of **MW-10**

Client Sample ID: **MW-10**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586001
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 17:59
Container ID: 1209586001-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586002
Lab Project ID: 1209586

Collection Date: 08/18/20 11:45
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.216	J	0.615	0.184	mg/L	1		09/01/20 18:01
Surrogates								
5a Androstane (surr)	93.5		50-150		%	1		09/01/20 18:01

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:01
Container ID: 1209586002-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 244 mL
Prep Extract Vol: 1 mL

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586002
Lab Project ID: 1209586

Collection Date: 08/18/20 11:45
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/27/20 22:19
Surrogates								
4-Bromofluorobenzene (surr)	75.9		50-150		%	1		08/27/20 22:19

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 22:19
Container ID: 1209586002-C

Prep Batch: VXX36229
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586002
Lab Project ID: 1209586

Collection Date: 08/18/20 11:45
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		08/23/20 18:13
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		08/23/20 18:13
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		08/23/20 18:13
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		08/23/20 18:13
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		08/23/20 18:13
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		08/23/20 18:13
Benzene	0.200	U	0.400	0.120	ug/L	1		08/23/20 18:13
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
Bromoform	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
Bromomethane	2.50	U	5.00	2.00	ug/L	1		08/23/20 18:13
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		08/23/20 18:13
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		08/23/20 18:13
Chloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 18:13

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586002
Lab Project ID: 1209586

Collection Date: 08/18/20 11:45
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Chloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		08/23/20 18:13
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 18:13
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Freon-113	5.00 U		10.0	3.10	ug/L	1		08/23/20 18:13
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Methylene chloride	5.00 U		10.0	3.10	ug/L	1		08/23/20 18:13
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		08/23/20 18:13
Naphthalene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
o-Xylene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		08/23/20 18:13
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Styrene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Toluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 18:13
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		08/23/20 18:13
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		08/23/20 18:13
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		08/23/20 18:13
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	1		08/23/20 18:13
4-Bromofluorobenzene (surr)	106		85-114		%	1		08/23/20 18:13
Toluene-d8 (surr)	103		89-112		%	1		08/23/20 18:13

Results of **MW-6**

Client Sample ID: **MW-6**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586002
Lab Project ID: 1209586

Collection Date: 08/18/20 11:45
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 18:13
Container ID: 1209586002-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-2**

Client Sample ID: **MW-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586003
Lab Project ID: 1209586

Collection Date: 08/18/20 13:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.632		0.630	0.189	mg/L	1		09/01/20 18:11
Surrogates								
5a Androstane (surr)	94.8		50-150		%	1		09/01/20 18:11

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:11
Container ID: 1209586003-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 238 mL
Prep Extract Vol: 1 mL

Results of **MW-2**

Client Sample ID: **MW-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586003
Lab Project ID: 1209586

Collection Date: 08/18/20 13:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.203		0.100	0.0310	mg/L	1		08/27/20 22:36
Surrogates								
4-Bromofluorobenzene (surr)	69.6		50-150		%	1		08/27/20 22:36

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 22:36
Container ID: 1209586003-C

Prep Batch: VXX36229
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-2**

Client Sample ID: **MW-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586003
Lab Project ID: 1209586

Collection Date: 08/18/20 13:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
1,1,1-Trichloroethane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,1,2,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
1,1,2-Trichloroethane	0.200 U		0.400	0.120	ug/L	1		08/24/20 21:59
1,1-Dichloroethane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,1-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,1-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,2,3-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,2,3-Trichloropropane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,2,4-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,2,4-Trimethylbenzene	6.42		1.00	0.310	ug/L	1		08/24/20 21:59
1,2-Dibromo-3-chloropropane	5.00 U		10.0	3.10	ug/L	1		08/24/20 21:59
1,2-Dibromoethane	0.0375 U		0.0750	0.0180	ug/L	1		08/24/20 21:59
1,2-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,2-Dichloroethane	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
1,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,3,5-Trimethylbenzene	6.97		1.00	0.310	ug/L	1		08/24/20 21:59
1,3-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
1,3-Dichloropropane	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
1,4-Dichlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
2,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
2-Butanone (MEK)	5.00 U		10.0	3.10	ug/L	1		08/24/20 21:59
2-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
2-Hexanone	5.00 U		10.0	3.10	ug/L	1		08/24/20 21:59
4-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
4-Isopropyltoluene	1.05		1.00	0.310	ug/L	1		08/24/20 21:59
4-Methyl-2-pentanone (MIBK)	5.00 U		10.0	3.10	ug/L	1		08/24/20 21:59
Benzene	0.740		0.400	0.120	ug/L	1		08/24/20 21:59
Bromobenzene	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
Bromochloromethane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
Bromodichloromethane	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
Bromoform	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
Bromomethane	2.50 U		5.00	2.00	ug/L	1		08/24/20 21:59
Carbon disulfide	5.00 U		10.0	3.10	ug/L	1		08/24/20 21:59
Carbon tetrachloride	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59
Chlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/24/20 21:59
Chloroethane	0.500 U		1.00	0.310	ug/L	1		08/24/20 21:59

Print Date: 09/08/2020 4:05:42PM

J flagging is activated

Results of **MW-2**

Client Sample ID: **MW-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586003
Lab Project ID: 1209586

Collection Date: 08/18/20 13:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Chloromethane	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		08/24/20 21:59
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		08/24/20 21:59
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Ethylbenzene	7.28		1.00	0.310	ug/L	1		08/24/20 21:59
Freon-113	5.00	U	10.0	3.10	ug/L	1		08/24/20 21:59
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Isopropylbenzene (Cumene)	2.28		1.00	0.310	ug/L	1		08/24/20 21:59
Methylene chloride	5.00	U	10.0	3.10	ug/L	1		08/24/20 21:59
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		08/24/20 21:59
Naphthalene	0.779	J	1.00	0.310	ug/L	1		08/24/20 21:59
n-Butylbenzene	0.627	J	1.00	0.310	ug/L	1		08/24/20 21:59
n-Propylbenzene	4.78		1.00	0.310	ug/L	1		08/24/20 21:59
o-Xylene	0.669	J	1.00	0.310	ug/L	1		08/24/20 21:59
P & M -Xylene	15.0		2.00	0.620	ug/L	1		08/24/20 21:59
sec-Butylbenzene	0.901	J	1.00	0.310	ug/L	1		08/24/20 21:59
Styrene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Toluene	0.886	J	1.00	0.310	ug/L	1		08/24/20 21:59
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		08/24/20 21:59
Trichlorofluoromethane	15.4		1.00	0.310	ug/L	1		08/24/20 21:59
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		08/24/20 21:59
Vinyl chloride	0.0750	U	0.150	0.0500	ug/L	1		08/24/20 21:59
Xylenes (total)	15.6		3.00	1.00	ug/L	1		08/24/20 21:59
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		81-118		%	1		08/24/20 21:59
4-Bromofluorobenzene (surr)	105		85-114		%	1		08/24/20 21:59
Toluene-d8 (surr)	104		89-112		%	1		08/24/20 21:59

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Results of **MW-2**

Client Sample ID: **MW-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586003
Lab Project ID: 1209586

Collection Date: 08/18/20 13:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20239
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/24/20 21:59
Container ID: 1209586003-G

Prep Batch: VXX36200
Prep Method: SW5030B
Prep Date/Time: 08/24/20 15:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Sodium	41600		5000	1500	ug/L	10		08/28/20 13:21

Batch Information

Analytical Batch: MMS10865
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 08/28/20 13:21
Container ID: 1209586004-I

Prep Batch: MXX33569
Prep Method: E200.2
Prep Date/Time: 08/24/20 17:36
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	1.96		0.610	0.183	mg/L	1		09/01/20 18:21
Surrogates								
5a Androstane (surr)	91.8		50-150		%	1		09/01/20 18:21

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:21
Container ID: 1209586004-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 246 mL
Prep Extract Vol: 1 mL

Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.76		0.500	0.155	mg/L	5		08/27/20 19:04
Surrogates								
4-Bromofluorobenzene (surr)	122		50-150		%	5		08/27/20 19:04

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 19:04
Container ID: 1209586004-C

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
1,1,1-Trichloroethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,1,2,2-Tetrachloroethane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
1,1,2-Trichloroethane	1.00	U	2.00	0.600	ug/L	5		08/24/20 23:41
1,1-Dichloroethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,1-Dichloroethene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,1-Dichloropropene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,2,3-Trichlorobenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,2,3-Trichloropropane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,2,4-Trichlorobenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,2,4-Trimethylbenzene	457		20.0	6.20	ug/L	20		08/23/20 20:55
1,2-Dibromo-3-chloropropane	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
1,2-Dibromoethane	0.188	U	0.375	0.0900	ug/L	5		08/24/20 23:41
1,2-Dichlorobenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,2-Dichloroethane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
1,2-Dichloropropane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,3,5-Trimethylbenzene	88.0		20.0	6.20	ug/L	20		08/23/20 20:55
1,3-Dichlorobenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
1,3-Dichloropropane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
1,4-Dichlorobenzene	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
2,2-Dichloropropane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
2-Butanone (MEK)	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
2-Chlorotoluene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
2-Hexanone	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
4-Chlorotoluene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
4-Isopropyltoluene	5.08		5.00	1.55	ug/L	5		08/24/20 23:41
4-Methyl-2-pentanone (MIBK)	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Benzene	1.70	J	2.00	0.600	ug/L	5		08/24/20 23:41
Bromobenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Bromochloromethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Bromodichloromethane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
Bromoform	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Bromomethane	12.5	U	25.0	10.0	ug/L	5		08/24/20 23:41
Carbon disulfide	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Carbon tetrachloride	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Chlorobenzene	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
Chloroethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41

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Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Chloromethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
cis-1,2-Dichloroethene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
cis-1,3-Dichloropropene	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
Dibromochloromethane	1.25	U	2.50	0.750	ug/L	5		08/24/20 23:41
Dibromomethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Dichlorodifluoromethane	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Ethylbenzene	83.7		20.0	6.20	ug/L	20		08/23/20 20:55
Freon-113	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Hexachlorobutadiene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Isopropylbenzene (Cumene)	21.9		5.00	1.55	ug/L	5		08/24/20 23:41
Methylene chloride	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Methyl-t-butyl ether	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Naphthalene	8.05		5.00	1.55	ug/L	5		08/24/20 23:41
n-Butylbenzene	4.45	J	5.00	1.55	ug/L	5		08/24/20 23:41
n-Propylbenzene	40.5		20.0	6.20	ug/L	20		08/23/20 20:55
o-Xylene	21.4		5.00	1.55	ug/L	5		08/24/20 23:41
P & M -Xylene	299		10.0	3.10	ug/L	5		08/24/20 23:41
sec-Butylbenzene	4.83	J	5.00	1.55	ug/L	5		08/24/20 23:41
Styrene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
tert-Butylbenzene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Tetrachloroethene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Toluene	1.86	J	5.00	1.55	ug/L	5		08/24/20 23:41
trans-1,2-Dichloroethene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
trans-1,3-Dichloropropene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Trichloroethene	2.50	U	5.00	1.55	ug/L	5		08/24/20 23:41
Trichlorofluoromethane	22.1		5.00	1.55	ug/L	5		08/24/20 23:41
Vinyl acetate	25.0	U	50.0	15.5	ug/L	5		08/24/20 23:41
Vinyl chloride	0.375	U	0.750	0.250	ug/L	5		08/24/20 23:41
Xylenes (total)	320		15.0	5.00	ug/L	5		08/24/20 23:41
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	20		08/23/20 20:55
4-Bromofluorobenzene (surr)	103		85-114		%	20		08/23/20 20:55
Toluene-d8 (surr)	104		89-112		%	20		08/23/20 20:55

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Results of **MW-17-2**

Client Sample ID: **MW-17-2**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586004
Lab Project ID: 1209586

Collection Date: 08/18/20 14:12
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 20:55
Container ID: 1209586004-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS20239
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/24/20 23:41
Container ID: 1209586004-D

Prep Batch: VXX36200
Prep Method: SW5030B
Prep Date/Time: 08/24/20 15:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Sodium	12400		5000	1500	ug/L	10		08/27/20 19:39

Batch Information

Analytical Batch: MMS10864
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 08/27/20 19:39
Container ID: 1209586005-I

Prep Batch: MXX33569
Prep Method: E200.2
Prep Date/Time: 08/24/20 17:36
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.825		0.670	0.201	mg/L	1		09/01/20 18:31
Surrogates								
5a Androstane (surr)	94.3		50-150		%	1		09/01/20 18:31

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:31
Container ID: 1209586005-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 224 mL
Prep Extract Vol: 1 mL

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.68		1.00	0.310	mg/L	10		08/27/20 18:11
Surrogates								
4-Bromofluorobenzene (surr)	101		50-150		%	10		08/27/20 18:11

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 18:11
Container ID: 1209586005-C

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
1,1,1-Trichloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,1,2,2-Tetrachloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
1,1,2-Trichloroethane	0.200 U		0.400	0.120	ug/L	1		08/23/20 20:11
1,1-Dichloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,1-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,1-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,2,3-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,2,3-Trichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,2,4-Trichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,2,4-Trimethylbenzene	190		20.0	6.20	ug/L	20		08/24/20 23:56
1,2-Dibromo-3-chloropropane	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
1,2-Dibromoethane	0.0375 U		0.0750	0.0180	ug/L	1		08/23/20 20:11
1,2-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,2-Dichloroethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
1,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,3,5-Trimethylbenzene	117		1.00	0.310	ug/L	1		08/23/20 20:11
1,3-Dichlorobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
1,3-Dichloropropane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
1,4-Dichlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
2,2-Dichloropropane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
2-Butanone (MEK)	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
2-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
2-Hexanone	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
4-Chlorotoluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
4-Isopropyltoluene	1.83		1.00	0.310	ug/L	1		08/23/20 20:11
4-Methyl-2-pentanone (MIBK)	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Benzene	30.8		0.400	0.120	ug/L	1		08/23/20 20:11
Bromobenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Bromochloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Bromodichloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
Bromoform	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Bromomethane	2.50 U		5.00	2.00	ug/L	1		08/23/20 20:11
Carbon disulfide	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Carbon tetrachloride	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Chlorobenzene	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
Chloroethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Chloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 20:11
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Ethylbenzene	151		20.0	6.20	ug/L	20		08/24/20 23:56
Freon-113	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Isopropylbenzene (Cumene)	24.7		1.00	0.310	ug/L	1		08/23/20 20:11
Methylene chloride	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Naphthalene	7.29		1.00	0.310	ug/L	1		08/23/20 20:11
n-Butylbenzene	2.53		1.00	0.310	ug/L	1		08/23/20 20:11
n-Propylbenzene	49.2		1.00	0.310	ug/L	1		08/23/20 20:11
o-Xylene	109		20.0	6.20	ug/L	20		08/24/20 23:56
P & M -Xylene	524		40.0	12.4	ug/L	20		08/24/20 23:56
sec-Butylbenzene	3.35		1.00	0.310	ug/L	1		08/23/20 20:11
Styrene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Toluene	386		20.0	6.20	ug/L	20		08/24/20 23:56
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 20:11
Trichlorofluoromethane	15.0 J		20.0	6.20	ug/L	20		08/24/20 23:56
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		08/23/20 20:11
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		08/23/20 20:11
Xylenes (total)	896		3.00	1.00	ug/L	1		08/23/20 20:11
Surrogates								
1,2-Dichloroethane-D4 (surr)	96.6		81-118		%	1		08/23/20 20:11
4-Bromofluorobenzene (surr)	93.4		85-114		%	1		08/23/20 20:11
Toluene-d8 (surr)	104		89-112		%	1		08/23/20 20:11

Results of **MW-17-5**

Client Sample ID: **MW-17-5**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586005
Lab Project ID: 1209586

Collection Date: 08/18/20 15:00
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 20:11
Container ID: 1209586005-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS20239
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/24/20 23:56
Container ID: 1209586005-G

Prep Batch: VXX36200
Prep Method: SW5030B
Prep Date/Time: 08/24/20 15:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Sodium	28800		5000	1500	ug/L	10		08/27/20 19:42

Batch Information

Analytical Batch: MMS10864
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 08/27/20 19:42
Container ID: 1209586006-I

Prep Batch: MXX33569
Prep Method: E200.2
Prep Date/Time: 08/24/20 17:36
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	2.84		0.620	0.186	mg/L	1		09/01/20 18:41
Surrogates								
5a Androstane (surr)	95.3		50-150		%	1		09/01/20 18:41

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:41
Container ID: 1209586006-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 242 mL
Prep Extract Vol: 1 mL

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	12.6		1.00	0.310	mg/L	10		08/27/20 17:53
Surrogates								
4-Bromofluorobenzene (surr)	155	*	50-150		%	10		08/27/20 17:53

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 17:53
Container ID: 1209586006-C

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
1,1,1-Trichloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,1,2,2-Tetrachloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
1,1,2-Trichloroethane	4.00	U	8.00	2.40	ug/L	20		08/23/20 21:10
1,1-Dichloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,1-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,1-Dichloropropene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,2,3-Trichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,2,3-Trichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,2,4-Trichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,2,4-Trimethylbenzene	2260		20.0	6.20	ug/L	20		08/23/20 21:10
1,2-Dibromo-3-chloropropane	100	U	200	62.0	ug/L	20		08/23/20 21:10
1,2-Dibromoethane	0.750	U	1.50	0.360	ug/L	20		08/23/20 21:10
1,2-Dichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,2-Dichloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
1,2-Dichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,3,5-Trimethylbenzene	633		20.0	6.20	ug/L	20		08/23/20 21:10
1,3-Dichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
1,3-Dichloropropane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
1,4-Dichlorobenzene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
2,2-Dichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
2-Butanone (MEK)	100	U	200	62.0	ug/L	20		08/23/20 21:10
2-Chlorotoluene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
2-Hexanone	100	U	200	62.0	ug/L	20		08/23/20 21:10
4-Chlorotoluene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
4-Isopropyltoluene	13.0	J	20.0	6.20	ug/L	20		08/23/20 21:10
4-Methyl-2-pentanone (MIBK)	100	U	200	62.0	ug/L	20		08/23/20 21:10
Benzene	24.4		8.00	2.40	ug/L	20		08/23/20 21:10
Bromobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Bromochloromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Bromodichloromethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
Bromoform	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Bromomethane	50.0	U	100	40.0	ug/L	20		08/23/20 21:10
Carbon disulfide	100	U	200	62.0	ug/L	20		08/23/20 21:10
Carbon tetrachloride	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Chlorobenzene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
Chloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Chloromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
cis-1,2-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
cis-1,3-Dichloropropene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
Dibromochloromethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:10
Dibromomethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Dichlorodifluoromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Ethylbenzene	637		20.0	6.20	ug/L	20		08/23/20 21:10
Freon-113	100	U	200	62.0	ug/L	20		08/23/20 21:10
Hexachlorobutadiene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Isopropylbenzene (Cumene)	82.0		20.0	6.20	ug/L	20		08/23/20 21:10
Methylene chloride	100	U	200	62.0	ug/L	20		08/23/20 21:10
Methyl-t-butyl ether	100	U	200	62.0	ug/L	20		08/23/20 21:10
Naphthalene	34.8		20.0	6.20	ug/L	20		08/23/20 21:10
n-Butylbenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
n-Propylbenzene	161		20.0	6.20	ug/L	20		08/23/20 21:10
o-Xylene	1840		20.0	6.20	ug/L	20		08/23/20 21:10
P & M -Xylene	5020		40.0	12.4	ug/L	20		08/23/20 21:10
sec-Butylbenzene	10.5	J	20.0	6.20	ug/L	20		08/23/20 21:10
Styrene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
tert-Butylbenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Tetrachloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Toluene	194		20.0	6.20	ug/L	20		08/23/20 21:10
trans-1,2-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
trans-1,3-Dichloropropene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Trichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Trichlorofluoromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:10
Vinyl acetate	100	U	200	62.0	ug/L	20		08/23/20 21:10
Vinyl chloride	1.50	U	3.00	1.00	ug/L	20		08/23/20 21:10
Xylenes (total)	6860		60.0	20.0	ug/L	20		08/23/20 21:10
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	20		08/23/20 21:10
4-Bromofluorobenzene (surr)	100		85-114		%	20		08/23/20 21:10
Toluene-d8 (surr)	104		89-112		%	20		08/23/20 21:10

Print Date: 09/08/2020 4:05:42PM

J flagging is activated

Results of **MW-3**

Client Sample ID: **MW-3**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586006
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 21:10
Container ID: 1209586006-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **Dup**

Client Sample ID: **Dup**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586007
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	3.41		0.600	0.180	mg/L	1		09/01/20 18:51
Surrogates								
5a Androstane (surr)	95.3		50-150		%	1		09/01/20 18:51

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/01/20 18:51
Container ID: 1209586007-A

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 08/27/20 14:34
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Results of **Dup**

Client Sample ID: **Dup**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586007
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	12.3		1.00	0.310	mg/L	10		08/27/20 17:35
Surrogates								
4-Bromofluorobenzene (surr)	159	*	50-150		%	10		08/27/20 17:35

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 17:35
Container ID: 1209586007-C

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **Dup**

Client Sample ID: **Dup**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586007
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
1,1,1-Trichloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,1,2,2-Tetrachloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
1,1,2-Trichloroethane	4.00	U	8.00	2.40	ug/L	20		08/23/20 21:24
1,1-Dichloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,1-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,1-Dichloropropene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,2,3-Trichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,2,3-Trichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,2,4-Trichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,2,4-Trimethylbenzene	2200		20.0	6.20	ug/L	20		08/23/20 21:24
1,2-Dibromo-3-chloropropane	100	U	200	62.0	ug/L	20		08/23/20 21:24
1,2-Dibromoethane	0.750	U	1.50	0.360	ug/L	20		08/23/20 21:24
1,2-Dichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,2-Dichloroethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
1,2-Dichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,3,5-Trimethylbenzene	625		20.0	6.20	ug/L	20		08/23/20 21:24
1,3-Dichlorobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
1,3-Dichloropropane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
1,4-Dichlorobenzene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
2,2-Dichloropropane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
2-Butanone (MEK)	100	U	200	62.0	ug/L	20		08/23/20 21:24
2-Chlorotoluene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
2-Hexanone	100	U	200	62.0	ug/L	20		08/23/20 21:24
4-Chlorotoluene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
4-Isopropyltoluene	13.4	J	20.0	6.20	ug/L	20		08/23/20 21:24
4-Methyl-2-pentanone (MIBK)	100	U	200	62.0	ug/L	20		08/23/20 21:24
Benzene	22.6		8.00	2.40	ug/L	20		08/23/20 21:24
Bromobenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Bromochloromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Bromodichloromethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
Bromoform	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Bromomethane	50.0	U	100	40.0	ug/L	20		08/23/20 21:24
Carbon disulfide	100	U	200	62.0	ug/L	20		08/23/20 21:24
Carbon tetrachloride	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Chlorobenzene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
Chloroethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24

Results of **Dup**

Client Sample ID: **Dup**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586007
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Chloromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
cis-1,2-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
cis-1,3-Dichloropropene	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
Dibromochloromethane	5.00	U	10.0	3.00	ug/L	20		08/23/20 21:24
Dibromomethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Dichlorodifluoromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Ethylbenzene	615		20.0	6.20	ug/L	20		08/23/20 21:24
Freon-113	100	U	200	62.0	ug/L	20		08/23/20 21:24
Hexachlorobutadiene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Isopropylbenzene (Cumene)	79.3		20.0	6.20	ug/L	20		08/23/20 21:24
Methylene chloride	100	U	200	62.0	ug/L	20		08/23/20 21:24
Methyl-t-butyl ether	100	U	200	62.0	ug/L	20		08/23/20 21:24
Naphthalene	35.6		20.0	6.20	ug/L	20		08/23/20 21:24
n-Butylbenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
n-Propylbenzene	157		20.0	6.20	ug/L	20		08/23/20 21:24
o-Xylene	1730		20.0	6.20	ug/L	20		08/23/20 21:24
P & M -Xylene	4810		40.0	12.4	ug/L	20		08/23/20 21:24
sec-Butylbenzene	9.92	J	20.0	6.20	ug/L	20		08/23/20 21:24
Styrene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
tert-Butylbenzene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Tetrachloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Toluene	176		20.0	6.20	ug/L	20		08/23/20 21:24
trans-1,2-Dichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
trans-1,3-Dichloropropene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Trichloroethene	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Trichlorofluoromethane	10.0	U	20.0	6.20	ug/L	20		08/23/20 21:24
Vinyl acetate	100	U	200	62.0	ug/L	20		08/23/20 21:24
Vinyl chloride	1.50	U	3.00	1.00	ug/L	20		08/23/20 21:24
Xylenes (total)	6530		60.0	20.0	ug/L	20		08/23/20 21:24
Surrogates								
1,2-Dichloroethane-D4 (surr)	105		81-118		%	20		08/23/20 21:24
4-Bromofluorobenzene (surr)	99.5		85-114		%	20		08/23/20 21:24
Toluene-d8 (surr)	103		89-112		%	20		08/23/20 21:24

Results of **Dup**

Client Sample ID: **Dup**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586007
Lab Project ID: 1209586

Collection Date: 08/18/20 15:55
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 21:24
Container ID: 1209586007-F

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586008
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/27/20 17:00
Surrogates								
4-Bromofluorobenzene (surr)	80.6		50-150		%	1		08/27/20 17:00

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/27/20 17:00
Container ID: 1209586008-B

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 08/27/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586008
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		08/23/20 14:33
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		08/23/20 14:33
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		08/23/20 14:33
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		08/23/20 14:33
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		08/23/20 14:33
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		08/23/20 14:33
Benzene	0.200	U	0.400	0.120	ug/L	1		08/23/20 14:33
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
Bromoform	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
Bromomethane	2.50	U	5.00	2.00	ug/L	1		08/23/20 14:33
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		08/23/20 14:33
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		08/23/20 14:33
Chloroethane	0.500	U	1.00	0.310	ug/L	1		08/23/20 14:33

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586008
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Chloromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		08/23/20 14:33
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		08/23/20 14:33
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Freon-113	5.00 U		10.0	3.10	ug/L	1		08/23/20 14:33
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Methylene chloride	5.00 U		10.0	3.10	ug/L	1		08/23/20 14:33
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		08/23/20 14:33
Naphthalene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
o-Xylene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		08/23/20 14:33
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Styrene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Toluene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		08/23/20 14:33
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		08/23/20 14:33
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		08/23/20 14:33
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		08/23/20 14:33
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	1		08/23/20 14:33
4-Bromofluorobenzene (surr)	107		85-114		%	1		08/23/20 14:33
Toluene-d8 (surr)	104		89-112		%	1		08/23/20 14:33

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Store 112 Remediation**
Lab Sample ID: 1209586008
Lab Project ID: 1209586

Collection Date: 08/18/20 11:15
Received Date: 08/21/20 09:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Analyst: NRB
Analytical Date/Time: 08/23/20 14:33
Container ID: 1209586008-D

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 08/23/20 10:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1810779 [MXX/33569]
Blank Lab ID: 1576892

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586004, 1209586005, 1209586006

Results by **EP200.8**

Parameter	Results	LOQ/CL	DL	Units
Sodium	250U	500	150	ug/L

Batch Information

Analytical Batch: MMS10864
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DMM
Analytical Date/Time: 8/27/2020 6:51:24PM

Prep Batch: MXX33569
Prep Method: E200.2
Prep Date/Time: 8/24/2020 5:36:54PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [MXX33569]
Blank Spike Lab ID: 1576893
Date Analyzed: 08/27/2020 18:54

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586004, 1209586005, 1209586006

Results by **EP200.8**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Sodium	10000	10800	108	(85-115)

Batch Information

Analytical Batch: **MMS10864**
Analytical Method: **EP200.8**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **DMM**

Prep Batch: **MXX33569**
Prep Method: **E200.2**
Prep Date/Time: **08/24/2020 17:36**
Spike Init Wt./Vol.: 10000 ug/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1576897
MS Sample ID: 1576898 MS
MSD Sample ID:

Analysis Date: 08/27/2020 19:06
Analysis Date: 08/27/2020 19:09
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586004, 1209586005, 1209586006

Results by **EP200.8**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Sodium	250U	10000	306000	3060 *				70-130		

Batch Information

Analytical Batch: MMS10864
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DMM
Analytical Date/Time: 8/27/2020 7:09:19PM

Prep Batch: MXX33569
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 8/24/2020 5:36:54PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 09/08/2020 4:05:50PM

Method Blank

Blank ID: MB for HBN 1810753 [VXX/36193]
Blank Lab ID: 1576794

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
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

Method Blank

Blank ID: MB for HBN 1810753 [VXX/36193]
Blank Lab ID: 1576794

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
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
Surrogates				
1,2-Dichloroethane-D4 (surr)	103	81-118		%
4-Bromofluorobenzene (surr)	111	85-114		%
Toluene-d8 (surr)	104	89-112		%

Method Blank

Blank ID: MB for HBN 1810753 [VXX/36193]
Blank Lab ID: 1576794

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS20236
Analytical Method: SW8260D
Instrument: Agilent 7890-75MS
Analyst: NRB
Analytical Date/Time: 8/23/2020 10:34:00AM

Prep Batch: VXX36193
Prep Method: SW5030B
Prep Date/Time: 8/23/2020 10:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
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Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36193]
Blank Spike Lab ID: 1576795
Date Analyzed: 08/23/2020 11:08

Spike Duplicate ID: LCSD for HBN 1209586 [VXX36193]
Spike Duplicate Lab ID: 1576796
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	29.4	98	30	30.2	101	(78-124)	2.70	(< 20)
1,1,1-Trichloroethane	30	30.5	102	30	29.5	98	(74-131)	3.20	(< 20)
1,1,2,2-Tetrachloroethane	30	30.4	101	30	31.0	103	(71-121)	1.90	(< 20)
1,1,2-Trichloroethane	30	30.2	101	30	31.2	104	(80-119)	3.10	(< 20)
1,1-Dichloroethane	30	31.0	103	30	30.3	101	(77-125)	2.30	(< 20)
1,1-Dichloroethene	30	35.5	118	30	33.5	112	(71-131)	5.70	(< 20)
1,1-Dichloropropene	30	31.7	106	30	30.6	102	(79-125)	3.50	(< 20)
1,2,3-Trichlorobenzene	30	27.9	93	30	29.0	97	(69-129)	3.70	(< 20)
1,2,3-Trichloropropane	30	29.4	98	30	29.9	100	(73-122)	1.80	(< 20)
1,2,4-Trichlorobenzene	30	28.4	95	30	29.8	99	(69-130)	4.80	(< 20)
1,2,4-Trimethylbenzene	30	32.5	108	30	32.2	107	(79-124)	0.82	(< 20)
1,2-Dibromo-3-chloropropane	30	28.8	96	30	29.8	100	(62-128)	3.60	(< 20)
1,2-Dibromoethane	30	28.7	96	30	30.0	100	(77-121)	4.20	(< 20)
1,2-Dichlorobenzene	30	30.3	101	30	30.5	102	(80-119)	0.71	(< 20)
1,2-Dichloroethane	30	29.3	98	30	29.3	98	(73-128)	0.18	(< 20)
1,2-Dichloropropane	30	31.2	104	30	30.9	103	(78-122)	1.10	(< 20)
1,3,5-Trimethylbenzene	30	31.6	105	30	32.0	107	(75-124)	1.30	(< 20)
1,3-Dichlorobenzene	30	30.9	103	30	31.3	104	(80-119)	1.10	(< 20)
1,3-Dichloropropane	30	30.0	100	30	30.6	102	(80-119)	1.90	(< 20)
1,4-Dichlorobenzene	30	30.7	102	30	30.7	102	(79-118)	0.07	(< 20)
2,2-Dichloropropane	30	32.3	108	30	30.9	103	(60-139)	4.20	(< 20)
2-Butanone (MEK)	90	97.0	108	90	106	118	(56-143)	8.80	(< 20)
2-Chlorotoluene	30	32.8	109	30	32.2	107	(79-122)	1.80	(< 20)
2-Hexanone	90	91.4	102	90	94.9	105	(57-139)	3.70	(< 20)
4-Chlorotoluene	30	32.1	107	30	32.0	107	(78-122)	0.28	(< 20)
4-Isopropyltoluene	30	30.5	102	30	31.5	105	(77-127)	3.50	(< 20)
4-Methyl-2-pentanone (MIBK)	90	92.8	103	90	93.2	104	(67-130)	0.41	(< 20)
Benzene	30	31.3	104	30	31.2	104	(79-120)	0.55	(< 20)
Bromobenzene	30	29.6	99	30	29.7	99	(80-120)	0.51	(< 20)
Bromochloromethane	30	29.5	98	30	29.5	98	(78-123)	0.04	(< 20)
Bromodichloromethane	30	30.5	102	30	30.3	101	(79-125)	0.65	(< 20)
Bromoform	30	28.4	95	30	29.1	97	(66-130)	2.70	(< 20)
Bromomethane	30	27.7	92	30	26.8	90	(53-141)	3.20	(< 20)
Carbon disulfide	45	53.3	118	45	49.8	111	(64-133)	6.80	(< 20)

Print Date: 09/08/2020 4:05:54PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36193]
Blank Spike Lab ID: 1576795
Date Analyzed: 08/23/2020 11:08

Spike Duplicate ID: LCSD for HBN 1209586 [VXX36193]
Spike Duplicate Lab ID: 1576796
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	30.1	100	30	29.0	97	(72-136)	3.50	(< 20)
Chlorobenzene	30	29.1	97	30	29.2	97	(82-118)	0.30	(< 20)
Chloroethane	30	38.9	130	30	36.6	122	(60-138)	6.30	(< 20)
Chloroform	30	30.2	101	30	29.8	99	(79-124)	1.60	(< 20)
Chloromethane	30	31.8	106	30	29.2	97	(50-139)	8.60	(< 20)
cis-1,2-Dichloroethene	30	30.4	101	30	29.7	99	(78-123)	2.20	(< 20)
cis-1,3-Dichloropropene	30	31.4	105	30	31.1	104	(75-124)	0.96	(< 20)
Dibromochloromethane	30	28.5	95	30	29.4	98	(74-126)	3.10	(< 20)
Dibromomethane	30	29.9	100	30	29.9	100	(79-123)	0.03	(< 20)
Dichlorodifluoromethane	30	31.7	106	30	29.4	98	(32-152)	7.50	(< 20)
Ethylbenzene	30	32.6	109	30	32.2	107	(79-121)	1.30	(< 20)
Freon-113	45	53.5	119	45	50.9	113	(70-136)	5.00	(< 20)
Hexachlorobutadiene	30	25.6	85	30	26.7	89	(66-134)	4.40	(< 20)
Isopropylbenzene (Cumene)	30	32.2	107	30	32.3	108	(72-131)	0.31	(< 20)
Methylene chloride	30	31.6	105	30	31.0	103	(74-124)	2.00	(< 20)
Methyl-t-butyl ether	45	47.3	105	45	47.2	105	(71-124)	0.23	(< 20)
Naphthalene	30	29.7	99	30	29.8	100	(61-128)	0.47	(< 20)
n-Butylbenzene	30	29.9	100	30	32.4	108	(75-128)	8.00	(< 20)
n-Propylbenzene	30	33.8	113	30	33.9	113	(76-126)	0.29	(< 20)
o-Xylene	30	32.3	108	30	32.3	108	(78-122)	0.18	(< 20)
P & M -Xylene	60	64.7	108	60	63.8	106	(80-121)	1.30	(< 20)
sec-Butylbenzene	30	32.0	107	30	33.6	112	(77-126)	4.80	(< 20)
Styrene	30	32.2	107	30	32.2	107	(78-123)	0.05	(< 20)
tert-Butylbenzene	30	31.2	104	30	32.2	107	(78-124)	2.90	(< 20)
Tetrachloroethene	30	28.2	94	30	28.3	94	(74-129)	0.27	(< 20)
Toluene	30	29.5	99	30	29.6	99	(80-121)	0.07	(< 20)
trans-1,2-Dichloroethene	30	31.4	105	30	30.2	101	(75-124)	3.70	(< 20)
trans-1,3-Dichloropropene	30	31.4	105	30	32.5	108	(73-127)	3.20	(< 20)
Trichloroethene	30	30.5	102	30	29.7	99	(79-123)	2.50	(< 20)
Trichlorofluoromethane	30	38.6	129	30	33.1	110	(65-141)	15.30	(< 20)
Vinyl acetate	30	32.3	108	30	32.3	108	(54-146)	0.07	(< 20)
Vinyl chloride	30	34.2	114	30	31.7	106	(58-137)	7.80	(< 20)
Xylenes (total)	90	96.9	108	90	96.1	107	(79-121)	0.80	(< 20)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36193]
Blank Spike Lab ID: 1576795
Date Analyzed: 08/23/2020 11:08

Spike Duplicate ID: LCSD for HBN 1209586 [VXX36193]
Spike Duplicate Lab ID: 1576796
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586001, 1209586002, 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **SW8260D**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	99.5	100	30	98.1	98	(81-118)	1.40	
4-Bromofluorobenzene (surr)	30	102	102	30	102	102	(85-114)	0.04	
Toluene-d8 (surr)	30	99.1	99	30	98.9	99	(89-112)	0.14	

Batch Information

Analytical Batch: **VMS20236**
Analytical Method: **SW8260D**
Instrument: **Agilent 7890-75MS**
Analyst: **NRB**

Prep Batch: **VXX36193**
Prep Method: **SW5030B**
Prep Date/Time: **08/23/2020 10:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

SGS North America Inc.
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Method Blank

Blank ID: MB for HBN 1810785 3[VVX 56009
Blank] aL ID: 1b754/ 6

Matrix: Water (Surface2Eff.2Ground)

QC for Samples:
1604b8500/ 21604b8500, 21604b8500b

Results Ly **SW8260D**

Parameter	Results	] OQXC]	D]	Units
12121216-Tetrachloroethane	0.6b0U	0.b00	0.1b0	ugX
12121-Trichloroethane	0.b00U	1.00	0./ 10	ugX
1212626-Tetrachloroethane	0.6b0U	0.b00	0.1b0	ugX
1212-Trichloroethane	0.600U	0., 00	0.160	ugX
121-Dichloroethane	0.b00U	1.00	0./ 10	ugX
121-Dichloroethene	0.b00U	1.00	0./ 10	ugX
121-Dichloropropene	0.b00U	1.00	0./ 10	ugX
1262 -TrichloroLenzene	0.b00U	1.00	0./ 10	ugX
1262 -Trichloropropane	0.b00U	1.00	0./ 10	ugX
1262, -TrichloroLenzene	0.b00U	1.00	0./ 10	ugX
1262, -TrimethylLenzene	0.b00U	1.00	0./ 10	ugX
126-DiLromo-/ -chloropropane	b.00U	10.0	/ .10	ugX
126-DiLromoethane	0.0/ 7bU	0.07b0	0.0180	ugX
126-DichloroLenzene	0.b00U	1.00	0./ 10	ugX
126-Dichloroethane	0.6b0U	0.b00	0.1b0	ugX
126-Dichloropropane	0.b00U	1.00	0./ 10	ugX
12 2b-TrimethylLenzene	0.b00U	1.00	0./ 10	ugX
12 -DichloroLenzene	0.b00U	1.00	0./ 10	ugX
12 -Dichloropropane	0.6b0U	0.b00	0.1b0	ugX
12, -DichloroLenzene	0.6b0U	0.b00	0.1b0	ugX
6226-Dichloropropane	0.b00U	1.00	0./ 10	ugX
6-Butanone (MEK)	b.00U	10.0	/ .10	ugX
6-Chlorotoluene	0.b00U	1.00	0./ 10	ugX
6-Hexanone	b.00U	10.0	/ .10	ugX
, -Chlorotoluene	0.b00U	1.00	0./ 10	ugX
, -Isopropyltoluene	0.b00U	1.00	0./ 10	ugX
, -Methyl-6-pentanone (MIBK)	b.00U	10.0	/ .10	ugX
Benzene	0.600U	0., 00	0.160	ugX
BromoLenzene	0.b00U	1.00	0./ 10	ugX
Bromochloromethane	0.b00U	1.00	0./ 10	ugX
Bromodichloromethane	0.6b0U	0.b00	0.1b0	ugX
Bromoform	0.b00U	1.00	0./ 10	ugX
Bromomethane	6.b0U	b.00	6.00	ugX
CarLon disulfide	b.00U	10.0	/ .10	ugX
CarLon tetrachloride	0.b00U	1.00	0./ 10	ugX
ChloroLenzene	0.6b0U	0.b00	0.1b0	ugX
Chloroethane	0.b00U	1.00	0./ 10	ugX
Chloroform	0.b00U	1.00	0./ 10	ugX

Method Blank

Blank ID: MB for HBN 1810785 3[VVX 56009
Blank] aL ID: 1b754/ 6

Matrix: Water (Surface2Eff.2Ground)

QC for Samples:
1604b8500/ 21604b8500, 21604b8500b

Results Ly **SW8260D**

Parameter	Results	] OQXC]	D]	Units
Chloromethane	0.b00U	1.00	0./ 10	ugX
cis-12-Dichloroethene	0.b00U	1.00	0./ 10	ugX
cis-12 -Dichloropropene	0.6b0U	0.b00	0.1b0	ugX
DiLromochloromethane	0.6b0U	0.b00	0.1b0	ugX
DiLromomethane	0.b00U	1.00	0./ 10	ugX
Dichlorodifluoromethane	0.b00U	1.00	0./ 10	ugX
EthylLenzene	0.b00U	1.00	0./ 10	ugX
Freon-11/	b.00U	10.0	/ .10	ugX
HexachloroLutadiene	0.b00U	1.00	0./ 10	ugX
IsopropylLenzene (Cumene)	0.b00U	1.00	0./ 10	ugX
Methylene chloride	b.00U	10.0	/ .10	ugX
Methyl-t-Lutyl ether	b.00U	10.0	/ .10	ugX
Naphthalene	0.b00U	1.00	0./ 10	ugX
n-ButylLenzene	0.b00U	1.00	0./ 10	ugX
n-PropylLenzene	0.b00U	1.00	0./ 10	ugX
o-Vylene	0.b00U	1.00	0./ 10	ugX
P & M -Vylene	1.00U	6.00	0.560	ugX
sec-ButylLenzene	0.b00U	1.00	0./ 10	ugX
Styrene	0.b00U	1.00	0./ 10	ugX
tert-ButylLenzene	0.b00U	1.00	0./ 10	ugX
Tetrachloroethene	0.b00U	1.00	0./ 10	ugX
Toluene	0.b00U	1.00	0./ 10	ugX
trans-12-Dichloroethene	0.b00U	1.00	0./ 10	ugX
trans-12 -Dichloropropene	0.b00U	1.00	0./ 10	ugX
Trichloroethene	0.b00U	1.00	0./ 10	ugX
Trichlorofluoromethane	0.b00U	1.00	0./ 10	ugX
[inyl acetate	b.00U	10.0	/ .10	ugX
[inyl chloride	0.07b0U	0.1b0	0.0b00	ugX
Vylenes (total)	1.b0U	/ .00	1.00	ugX
Surrogates				
12-Dichloroethane-D, (surr)	106	81-118		%
, -BromofluoroLenzene (surr)	116	8b-11,		%
Toluene-d8 (surr)	10/	84-116		%

Print Date: 04X08X6060 , :0b:b7PM

Method Blank

Blank ID: MB for HBN 1810785 3[VVX 56009
Blank] aL ID: 1b754/ 6

Matrix: Water (Surface2Eff.2Ground)

QC for Samples:
1604b8500/ 21604b8500, 21604b8500b

Results Ly **SW8260D**

Parameter	Results	] OQXC]	D]	Units

Batch Information

Analytical Batch: [MS606/ 4
Analytical Method: SW8650D
Instrument: Agilent 7840-7bMS
Analyst: NRB
Analytical DateXTime: 8X6, X6060 / :, 7:00PM

Prep Batch: [VV/ 5600
Prep Method: SWb0/ 0B
Prep DateXTime: 8X6, X6060 / :00:00PM
Prep Initial Wt.X[ol.: b m]
Prep Extract [ol: b m]

Print Date: 04X08X6060 , :0b:b7PM

Leaching Blank

Blank ID:] B for HBN 1810b51 3TC] PX10778
Blank] aL ID: 1b7b87,

Matrix: Water (Surface2Eff.2Ground)

QC for Samples:
1604b8500/ 21604b8500, 21604b8500b

Results Ly **SW8260D**

Parameter	Results	] OQXC]	D]	Units
12l-Dichloroethene	6b.0U	b0.0	1b.b	ugX
12s-Dichloroethane	16.bU	6b.0	7.b0	ugX
12, -DichloroLenzene	16.bU	6b.0	7.b0	ugX
6-Butanone (MEK)	6b0U	b00	1bb	ugX
Benzene	10.0U	60.0	5.00	ugX
CarLon tetrachloride	6b.0U	b0.0	1b.b	ugX
ChloroLenzene	16.bU	6b.0	7.b0	ugX
Chloroform	6b.0U	b0.0	1b.b	ugX
HexachloroLutadiene	6b.0U	b0.0	1b.b	ugX
Tetrachloroethene	6b.0U	b0.0	1b.b	ugX
Trichloroethene	6b.0U	b0.0	1b.b	ugX
[inyl chloride	6b.0U	b0.0	1b.b	ugX
Surrogates				
12s-Dichloroethane-D, (surr)	101	81-118		%
, -BromofluoroLenzene (surr)	107	8b-11,		%
Toluene-d8 (surr)	10,	84-116		%

Batch Information

Analytical Batch: [MS606/ 4
Analytical Method: SW8650D
Instrument: Agilent 7840-7bMS
Analyst: NRB
Analytical DateXTime: 8X6, X6060 5:14:00PM

Prep Batch: [VV/ 5600
Prep Method: SWb0/ 0B
Prep DateXTime: 8X6, X6060 / :00:00PM
Prep Initial Wt.X[ol.: b m]
Prep Extract [ol: b m]

Print Date: 04X08X6060 , :0b:b7PM

Leaching Blank

Blank ID:] B for HBN 18105/ 1 3TC] PX10781
Blank] aL ID: 1b75188

Matrix: Water (Surface2Eff.2Ground)

QC for Samples:
1604b8500/ 21604b8500, 21604b8500b

Results Ly **SW8260D**

Parameter	Results	] OQXC]	D]	Units
12l-Dichloroethene	6b.0U	b0.0	1b.b	ugX
12s-Dichloroethane	16.bU	6b.0	7.b0	ugX
12, -DichloroLenzene	16.bU	6b.0	7.b0	ugX
6-Butanone (MEK)	6b0U	b00	1bb	ugX
Benzene	10.0U	60.0	5.00	ugX
CarLon tetrachloride	6b.0U	b0.0	1b.b	ugX
ChloroLenzene	16.bU	6b.0	7.b0	ugX
Chloroform	6b.0U	b0.0	1b.b	ugX
HexachloroLutadiene	6b.0U	b0.0	1b.b	ugX
Tetrachloroethene	6b.0U	b0.0	1b.b	ugX
Trichloroethene	6b.0U	b0.0	1b.b	ugX
[inyl chloride	6b.0U	b0.0	1b.b	ugX
Surrogates				
12s-Dichloroethane-D, (surr)	10/	81-118		%
, -BromofluoroLenzene (surr)	107	8b-11,		%
Toluene-d8 (surr)	10/	84-116		%

Batch Information

Analytical Batch: [MS606/ 4
Analytical Method: SW8650D
Instrument: Agilent 7840-7bMS
Analyst: NRB
Analytical DateXTime: 8X6, X6060 5:, 8:00PM

Prep Batch: [VV/ 5600
Prep Method: SWb0/ 0B
Prep DateXTime: 8X6, X6060 / :00:00PM
Prep Initial Wt.X[ol.: b m]
Prep Extract [ol: b m]

Print Date: 04X08X6060 , :0b:b7PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36200]
Blank Spike Lab ID: 1576933
Date Analyzed: 08/2u/2020 16:21

Spike DcpliRate ID: LCSD for HBN 1209586 [VXX36200]
Spike DcpliRate Lab ID: 157693u
x atriW (ater ,ScrfaReE. ffGE) rocndP

4 C for Sa%pleM 1209586003E120958600uE1209586005

s eMcltMby **SW8260D**

	Blank Spike ,cQLP			Spike DcpliRate ,cQLP					
mara%eter	Spike	s eMclt	s eR,g P	Spike	s eMclt	s eR,g P	CL	s mD ,g P	s mD CL
1EE2E2-TetaRhloroethane	30	306	102	30	306	102	, 78-12u P	0G5	,< 20 P
1EE-TriRhloroethane	30	30G	100	30	29G	98	, 7u-131 P	2G0	,< 20 P
1E2E2-TetaRhloroethane	30	30G	103	30	31G	106	, 71-121 P	2G0	,< 20 P
1E2-TriRhloroethane	30	31G	10u	30	31G	106	, 80-119 P	2G0	,< 20 P
1E-DiRhloroethane	30	305	102	30	302	101	, 77-125 P	0G9	,< 20 P
1E-DiRhloroethene	30	352	117	30	33G	113	, 71-131 P	uG0	,< 20 P
1E-DiRhloropropene	30	31G	10u	30	306	102	, 79-125 P	2G0	,< 20 P
1E2E3-TriRhlorobenzene	30	276	92	30	286	95	, 69-129 P	3G0	,< 20 P
1E2E3-TriRhloropropane	30	29G	97	30	30G	100	, 73-122 P	3G0	,< 20 P
1E2Eu-TriRhlorobenzene	30	285	95	30	29G	99	, 69-130 P	uG0	,< 20 P
1E2Eu-Tri%ethylbenzene	30	325	108	30	33G	110	, 79-12u P	1G0	,< 20 P
1E2-Dibro%o-3-Rhloropropane	30	285	95	30	29G	97	, 62-128 P	2G0	,< 20 P
1E2-Dibro%oethane	30	295	99	30	302	101	, 77-121 P	2G0	,< 20 P
1E2-DiRhlorobenzene	30	30G	101	30	31G	103	, 80-119 P	1G0	,< 20 P
1E2-DiRhloroethane	30	28G	96	30	29G	98	, 73-128 P	1G0	,< 20 P
1E2-DiRhloropropane	30	312	10u	30	31G	103	, 78-122 P	0G9	,< 20 P
1E3E5-Tri%ethylbenzene	30	325	108	30	32G	108	, 75-12u P	0G3	,< 20 P
1E3-DiRhlorobenzene	30	315	105	30	317	106	, 80-119 P	0G3	,< 20 P
1E3-DiRhloropropane	30	307	102	30	315	105	, 80-119 P	2G0	,< 20 P
1Eu-DiRhlorobenzene	30	31G	103	30	312	10u	, 79-118 P	0G6	,< 20 P
2E2-DiRhloropropane	30	319	106	30	31G	10u	, 60-139 P	2G0	,< 20 P
2-Bctanone ,x . KP	90	93G	10u	90	92G	103	, 56-1u3 P	0G7	,< 20 P
2-Chlorotolcene	30	336	112	30	33G	111	, 79-122 P	1G0	,< 20 P
2-HeWanone	90	89G	99	90	906	101	, 57-139 P	1G7	,< 20 P
u-Chlorotolcene	30	332	111	30	332	111	, 78-122 P	0G6	,< 20 P
u-IMopropyltolcene	30	31G	105	30	322	107	, 77-127 P	2G0	,< 20 P
u-x ethyl-2-pentanone ,x IBKP	90	88G	98	90	895	99	, 67-130 P	1G0	,< 20 P
Benzene	30	308	103	30	305	102	, 79-120 P	0G8	,< 20 P
Bro%obenzene	30	30G	100	30	30G	100	, 80-120 P	0G1	,< 20 P
Bro%oRhloro%ethane	30	28G	96	30	28G	96	, 78-123 P	0G9	,< 20 P
Bro%odiRhloro%ethane	30	30G	100	30	30G	100	, 79-125 P	0G5	,< 20 P
Bro%ofor%	30	28G	95	30	29G	98	, 66-130 P	3G0	,< 20 P
Bro%o%ethane	30	29G	97	30	27G	93	, 53-1u1 P	uG0	,< 20 P
Carbon diMclfide	u5	52G	118	u5	u9G	111	, 6u-133 P	5G0	,< 20 P

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36200]
Blank Spike Lab ID: 1576933
Date Analyzed: 08/2u/2020 16:21

Spike DcpliRate ID: LCSD for HBN 1209586 [VXX36200]
Spike DcpliRate Lab ID: 157693u
x atriW (ater ,ScrfaReE. ffGE) rocndP

4 C for Sa%pleM 1209586003E120958600uE1209586005

s eMcltMby **SW8260D**

	Blank Spike ,cQLP			Spike DcpliRate ,cQLP					
mara%eter	Spike	s eMclt	s eR,g P	Spike	s eMclt	s eR,g P	CL	s mD ,g P	s mD CL
Carbon tetraRhloride	30	296	99	30	288	96	, 72-136 P	26	,< 20 P
Chlorobenzene	30	296	99	30	296	99	, 82-118 P	0	,< 20 P
Chloroethane	30	37	125	30	363	121	, 60-138 P	3	,< 20 P
Chlorofor%	30	299	100	30	297	99	, 79-12u P	0	,< 20 P
Chloro%ethane	30	308	103	30	286	95	, 50-139 P	7	,< 20 P
RM1E2-DiRhloroethene	30	299	100	30	296	99	, 78-123 P	0	,< 20 P
RM1E3-DiRhloropropene	30	312	10u	30	313	10u	, 75-12u P	0	,< 20 P
Dibro%oRhloro%ethane	30	293	98	30	299	100	, 7u-126 P	2	,< 20 P
Dibro%o%ethane	30	292	97	30	296	99	, 79-123 P	1	,< 20 P
DiRhlorodiflcoro%ethane	30	29	98	30	269	90	, 32-152 P	8	,< 20 P
. thylbenzene	30	327	109	30	325	108	, 79-121 P	0	,< 20 P
Freon-113	u5	53	118	u5	509	113	, 70-136 P	3	,< 20 P
HeWaRhlorobctadiene	30	267	89	30	27	90	, 66-13u P	1	,< 20 P
IMopropylbenzene ,Cc%eneP	30	328	109	30	325	108	, 72-131 P	0	,< 20 P
x ethylene Rhloride	30	307	102	30	313	10u	, 7u-12u P	1	,< 20 P
x ethyl-t-bctyl ether	u5	u52	101	u5	u65	103	, 71-12u P	2	,< 20 P
Naphthalene	30	293	97	30	29	98	, 61-128 P	0	,< 20 P
n-Bctylbenzene	30	317	106	30	333	110	, 75-128 P	u	,< 20 P
n-mropylbenzene	30	35	117	30	3u6	115	, 76-126 P	1	,< 20 P
o-Xylene	30	33	110	30	325	108	, 78-122 P	1	,< 20 P
m & x -Xylene	60	652	109	60	6u	107	, 80-121 P	1	,< 20 P
MeR-Bctylbenzene	30	33	110	30	3u2	11u	, 77-126 P	3	,< 20 P
Styrene	30	32	108	30	32	107	, 78-123 P	1	,< 20 P
tert-Bctylbenzene	30	323	108	30	322	107	, 78-12u P	0	,< 20 P
TetraRhloroethene	30	296	99	30	289	96	, 7u-129 P	2	,< 20 P
Tolcene	30	305	102	30	303	100	, 80-121 P	1	,< 20 P
tranM1E2-DiRhloroethene	30	30	101	30	303	100	, 75-12u P	1	,< 20 P
tranM1E3-DiRhloropropene	30	326	109	30	328	109	, 73-127 P	0	,< 20 P
TriRhloroethene	30	303	101	30	296	99	, 79-123 P	2	,< 20 P
TriRhloroflcoro%ethane	30	333	111	30	336	112	, 65-1u1 P	0	,< 20 P
Vinyl aRetate	30	31	103	30	318	106	, 5u-1u6 P	2	,< 20 P
Vinyl Rhloride	30	338	113	30	308	103	, 58-137 P	9	,< 20 P
XyleneM,totalP	90	982	109	90	966	107	, 79-121 P	1	,< 20 P

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36200]
Blank Spike Lab ID: 1576933
Date Analyzed: 08/2u/2020 16:21

Spike DcpliRate ID: LCSD for HBN 1209586 [VXX36200]
Spike DcpliRate Lab ID: 157693u
x atriW (ater ,ScrfaReE. ffGE) rocndP

4 C for Sa%pleM 1209586003E120958600uE1209586005

s eMcltMby **SW8260D**

mara%eter	Spike	Blank Spike ,g P s eMclt	s eR,g P	Spike	Spike DcpliRate ,g P s eMclt	s eR,g P	CL	s mD ,g P	s mD CL
Surrogates									
1E2-DiRhloroethane-Du ,McrrP	30	97G5	98	30	97G5	98	, 81-118 P	0G02	
u-Bro%ofIcorobenzene ,McrrP	30	103	103	30	103	103	, 85-11u P	0G31	
Tolcene-d8 ,McrrP	30	99G9	100	30	100	100	, 89-112 P	0G16	

Batch Information

AnalytiRal BatRh: **VMS20239**
AnalytiRal x ethod: **SW8260D**
InMrc%ent: **Agilent 7890-75MS**
AnalyM: **NRB**

mrep BatRh: **VXX36200**
mrep x ethod: **SW5030B**
mrep Date/Ti%e: **08/24/2020 15:00**
Spike Init (tGVolG 30 cQL . WtraRt Vol: 5 %L
Dcpe Init (tGVolG 30 cQL . WtraRt Vol: 5 %L

Method Blank

Blank ID: MB for HBN 1810976 [VXX/36228]
Blank Lab ID: 1577752

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	75.6	50-150		%

Batch Information

Analytical Batch: VFC15314
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ALJ
Analytical Date/Time: 8/27/2020 12:44:00PM

Prep Batch: VXX36228
Prep Method: SW5030B
Prep Date/Time: 8/27/2020 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36228]
Blank Spike Lab ID: 1577755
Date Analyzed: 08/27/2020 13:37

Spike Duplicate ID: LCSD for HBN 1209586 [VXX36228]
Spike Duplicate Lab ID: 1577756
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586004, 1209586005, 1209586006, 1209586007, 1209586008

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.988	99	1.00	1.01	101	(60-120)	2.10	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	90.7	91	0.0500	90.8	91	(50-150)	0.18	

Batch Information

Analytical Batch: **VFC15314**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ALJ**

Prep Batch: **VXX36228**
Prep Method: **SW5030B**
Prep Date/Time: **08/27/2020 06:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1810978 6[VVX 3229]
Blank Lab ID: 1577759

Ma,rti : x a,er VS(rfaue4c ffE4. ro(nGd

QC for Samples:
120958300141209583002412095830 0/

) es(l,s bR **AK101**

Oarame,er	) es(l,s	LUQXCL	DL	y nt,s
. asoltne) anPe UrPantus	0ED500y	0E100	0ED/ 10	mPXL
Surrogates				
g-Bromofl(orobenzene VS(rrd	79E3	50-150		%

Batch Information

AnalR,tual Ba,uh: [FC15/ 1g
AnalR,tual Me,hoG: AK101
Ins,r(men,: APtlen, 7890A OIDXFID
AnalRs,: ALJ
AnalR,tual Da,eXTtme: 8X27X2020 10:01:00OM

Orep Ba,uh: [VV/ 3229
Orep Me,hoG: Sx 50/ 0B
Orep Da,eXTtme: 8X27X2020 3:00:00AM
Orep Int,tal x ,EX olE 5 mL
Orep ci ,rau, [ol: 5 mL

Ortn, Da,e: 09X08X2020 g:03:09OM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VXX36229]
Blank Spike Lab ID: 1577762
Date Analyzed: 08/27/2020 21:u3

Spike DcpliRate ID: LCSD for HBN 1209586 [VXX36229]
Spike DcpliRate Lab ID: 1577763
x atriW (ater ,ScrfaReE. ffGE) rocndP

4 C for Sa%pleM 1209586001E1209586002E1209586003

s eMcItMby **AK101**

	Blank Spike ,%Q'LP			Spike DcpliRate ,%Q'LP					
mara%eter	Spike	s eMcIt	s eR,g P	Spike	s eMcIt	s eR,g P	CL	s mD ,g P	s mD CL
) aMbline s anQe OrQaniRM	1G0	0G98u	98	1G0	0G919	92	, 60-120 P	6G90	,< 20 P
Surrogates									
u-Bro%ofIcorobenzene ,McrrP	0G500	90	90	0G500	86G3	86	, 50-150 P	uG20	

Batch Information

AnalytiRal BatRn: **VFC15314**
AnalytiRal x ethod: **AK101**
InMrc%ent: **Agilent 7890A PID/FID**
AnalyM: **ALJ**

mrep BatRn: **VXX36229**
mrep x ethod: **SW5030B**
mrep Date/Ti%e: **08/27/2020 06:00**
Spike Init (tGVolG 1G0 %Q'L . WtraRt Vol: 5 %L
Dcpe Init (tGVolG 1G0 %Q'L . WtraRt Vol: 5 %L

Method Blank

Blank ID: MB for HBN 1810915 [XXX/43746]
Blank Lab ID: 1577523

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1209586001, 1209586002, 1209586003, 1209586004, 1209586005, 1209586006, 1209586007

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	95.3	60-120		%

Batch Information

Analytical Batch: XFC15715
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: CDM
Analytical Date/Time: 9/1/2020 5:22:00PM

Prep Batch: XXX43746
Prep Method: SW3520C
Prep Date/Time: 8/27/2020 2:34:13PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1209586 [VVVX3] X6b
Blank Spike La7 ID: 15]] 52X
Date Analyzed: 09/01/2020 1] :32

Spike Duplicate ID: LCSD for HBN 1209586 [VVVX3] X6b
Spike Duplicate La7 ID: 15]] 525
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1209586001, 1209586002, 1209586003, 120958600X, 1209586005, 1209586006, 120958600]

Results 7y **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range 4 rganics	20	19.1	96	20	19.1	95	( ] 5Q25)	0.16	(- 20)
Surrogates									
5a Androstane (surr)	0.X	10X	10X	0.X	108	108	(60Q20)	3.50	

Batch Information

Analytical Batc<: **XFC15715**
Analytical Met<od: **AK102**
Instrument: **Agilent 7890B F**
Analyst: **CDM**

Prep Batc<: **XXX43746**
Prep Met<od: **SW3520C**
Prep Date/hime: **08/27/2020 14:34**
Spike Init Wt./Tol.: 20 mg/L Extract Tol: 1 mL
Dupe Init Wt./Tol.: 20 mg/L Extract Tol: 1 mL

SGS Nort< America Inc.
200 West Potter Drive Anc<orage, AK 95518
t 90] .562.23X3 **f** 90] .561.5301 www.us.sgs.com

SGS

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CHAIN OF

1209586

www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out.
Omissions may delay the onset of analysis.

Page 1 of 1

Section 1

CLIENT: Stantec Consulting

CONTACT: Bob Gilfilian

PHONE #: 907-227-9883

PROJECT NAME: Store 112 Remediation

PROJECT/ PWSID/ PERMIT#: 18574928

REPORTS TO:

E-MAIL: bob.gilfilian@stantec.com

Profile #:

INVOICE TO: Stantec

QUOTE #:

P.O. #: P#364284 AD

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Comp Grab MI (Multi-incremental)	Analysis* AK 101 GRO	AK 102 DRO	8260 VOCs	NO3 Nitrate	NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS	REMARKS/LOC ID
1AH	MW-10	08/18/20	11:~~45~~		8		X	X	X			
2AH	MW-6	08/18/20	11:45		8		X	X	X			
3AH	MW-2	08/18/20	13:00		8		X	X	X			
4AI	MW-17-2	8/18/20	14:12		9		X	X	X	X		
5AI	MW 17-5	8/18/20	~~15:00~~		9		X	X	X	X		
6AI	MW-3	8/18/20	15:55		9		X	X	X	X		
7AH	Dup	8/18/20	1555		8		X	X	X			
8AF												

Section 3 — Preservative

Section 4

DOD Project? Yes No

Data Deliverable Requirements:

Cooler ID:

Requested Turnaround Time and/or Special Instructions:

Section 5

	Date	Time	
Relinquished By: (1)	8/19/20	0815	Received By:
Relinquished By: (2)	8/20/20	1400	Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	8/21/20	9:54	Received For Laboratory By: RJC

Temp Blank °C: 4.1 ANC

or Ambient [ ]

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

Delivery Method: Hand Delivery [ ] Commerical Delivery [ ]

RJC 8/21

http://www.sgs.com/terms-and-conditions

4.0 D45

F083-Blank_COC_20181228

e-Sample Receipt Form

SGS Workorder #: **1209586**

1 2 0 9 5 8 6

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements	N/A	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	Yes	1F, 1B
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
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 @ 4.0 °C Therm. ID: D45
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.		
Holding Time / Documentation / Sample Condition Requirements		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	
	Yes	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
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)?	Yes	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		

Additional notes (if applicable):

e-Sample Receipt Form FBK

SGS Workorder #:	1209586	1209586

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements	Yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	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 @ 4.1 °C Therm. ID: D60
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:
*If >6°C, were samples collected <8 hours ago?		
If <0°C, were sample containers ice free?		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	N/C	
**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 samples in good condition (no leaks/cracks/breakage)?	Yes	
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
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/C	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
For Rush/Short Hold Time, was RUSH/Short HT email sent?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):

SGS Profile #		0

Sample Containers and Preservatives

Container Id	Preservative	Container Condition
1209586001-A	HCL to pH < 2	OK
1209586001-B	HCL to pH < 2	OK
1209586001-C	HCL to pH < 2	OK
1209586001-D	HCL to pH < 2	OK
1209586001-E	HCL to pH < 2	OK
1209586001-F	HCL to pH < 2	OK
1209586001-G	HCL to pH < 2	OK
1209586001-H	HCL to pH < 2	OK
1209586002-A	HCL to pH < 2	OK
1209586002-B	HCL to pH < 2	OK
1209586002-C	HCL to pH < 2	OK
1209586002-D	HCL to pH < 2	OK
1209586002-E	HCL to pH < 2	OK
1209586002-F	HCL to pH < 2	OK
1209586002-G	HCL to pH < 2	OK
1209586002-H	HCL to pH < 2	OK
1209586003-A	HCL to pH < 2	OK
1209586003-B	HCL to pH < 2	OK
1209586003-C	HCL to pH < 2	OK
1209586003-D	HCL to pH < 2	OK
1209586003-E	HCL to pH < 2	OK
1209586003-F	HCL to pH < 2	OK
1209586003-G	HCL to pH < 2	OK
1209586003-H	HCL to pH < 2	OK
1209586004-A	HCL to pH < 2	OK
1209586004-B	HCL to pH < 2	OK
1209586004-C	HCL to pH < 2	OK
1209586004-D	HCL to pH < 2	OK
1209586004-E	HCL to pH < 2	OK
1209586004-F	HCL to pH < 2	OK
1209586004-G	HCL to pH < 2	OK
1209586004-H	HCL to pH < 2	OK
1209586004-I	HNO3 to pH < 2	OK
1209586005-A	HCL to pH < 2	OK
1209586005-B	HCL to pH < 2	OK
1209586005-C	HCL to pH < 2	OK
1209586005-D	HCL to pH < 2	OK
1209586005-E	HCL to pH < 2	OK
1209586005-F	HCL to pH < 2	OK
1209586005-G	HCL to pH < 2	OK
1209586005-H	HCL to pH < 2	OK
1209586005-I	HNO3 to pH < 2	OK
1209586006-A	HCL to pH < 2	OK
1209586006-B	HCL to pH < 2	OK
1209586006-C	HCL to pH < 2	OK
1209586006-D	HCL to pH < 2	OK
1209586006-E	HCL to pH < 2	OK
1209586006-F	HCL to pH < 2	OK
1209586006-G	HCL to pH < 2	OK
1209586006-H	HCL to pH < 2	OK
1209586006-I	HNO3 to pH < 2	OK
1209586007-A	HCL to pH < 2	OK
1209586007-B	HCL to pH < 2	OK
1209586007-C	HCL to pH < 2	OK
1209586007-D	HCL to pH < 2	OK
1209586007-E	HCL to pH < 2	OK
1209586007-F	HCL to pH < 2	OK
1209586007-G	HCL to pH < 2	OK
1209586007-H	HCL to pH < 2	OK
1209586008-A	HCL to pH < 2	OK
1209586008-B	HCL to pH < 2	OK
1209586008-C	HCL to pH < 2	OK
1209586008-D	HCL to pH < 2	OK
1209586008-E	HCL to pH < 2	OK
1209586008-F	HCL to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

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 Report Number	1209586	CS Site Name	Speedway Store 5310
Laboratory Report Date	09/08/2020	ADEC File Number	100.26.159

Laboratory Data Review Checklist

Completed By:

Leslie Petre

Title:

Engineer in Training

Date:

November 30, 2020

Consultant Firm:

Stantec Consulting Service, LLC

Laboratory Name:

SGS North America Inc.

Laboratory Report Number:

1209586

Laboratory Report Date:

September 8, 2020

CS Site Name:

Speedway Store 5310 North Pole, AK

ADEC File Number:

100.26.159

Hazard Identification Number:

24476

Laboratory Report Number	1209586	CS Site Name	Speedway Store 5310
Laboratory Report Date	09/08/2020	ADEC File Number	100.26.159

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

1. Laboratory

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

   Yes☒ No☐ N/A☐ Comments:

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

   Yes☒ No☐ N/A☐ Comments:

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

3. Laboratory Sample Receipt Documentation

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

   Yes☒ No☐ N/A☐ Comments:

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

   Yes☒ No☐ N/A☐ Comments:

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

   Yes☒ No☐ N/A☐ 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☐ N/A☐ Comments:

e. Data quality or usability affected?

Comments:

No.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

Lab documented that surrogate recovery for 4-bromofluorobenzene does not meet QC Criteria due to matrix interference.

c. Were all corrective actions documented?

Yes☒ No☐ N/A☐ Comments:

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

Comments:

It does not affect the usability or data quality.

5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

c. All soils reported on a dry weight basis?

Yes☐ No☐ N/A☒ Comments:

No soils were tested.

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

Yes☒ No☐ N/A☐ Comments:

e. Data quality or usability affected?

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ 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☐ N/A☐ Comments:

v. Data quality or usability affected?

Comments:

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

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☐ No☒ N/A☐ Comments:

A duplicate for sodium was not submitted.

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Comments:

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

Yes☐ No☐ N/A☐ Comments:

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

Comments:

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

Note: Leave blank if not required for project

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

Yes☐ No☐ N/A☐ Comments:

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

Yes☐ No☐ N/A☐ Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes☐ No☐ N/A☐ Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes☐ No☐ N/A☐ Comments:

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

Comments:

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

Yes☐ No☐ N/A☐ Comments:

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

Comments:

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

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

Yes☐ No☐ N/A☐ Comments:

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 for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes☐ No☐ N/A☐ Comments:

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

Yes☐ No☐ N/A☐ Comments:

iv. Data quality or usability affected?

Comments:

e. Trip Blanks

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

Yes☐ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Comments:

v. Data quality or usability affected?

Comments:

f. Field Duplicate

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

Yes☐ No☒ N/A☐ Comments:

A duplicate for Sodium was not submitted. Sodium is not a regulated analyte for this project.

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

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

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

Yes☐ No☐ N/A☒ Comments:

New, disposable bailers and pipits are used for this project.

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

Yes☒ No☐ N/A☐ 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☐ N/A☐ Comments: