

Speedway Store 5325  
(Former Tesoro 2 Go Mart #52)  
ADEC File #2265.26.006

2Q 2021 GWM Event Report

Prepared For



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## ACRONYMS AND ABBREVIATIONS

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ADEC	Alaska Department of Environmental Conservation
AK	Alaska Test Method
amsl	above mean sea level
BTEX	benzene, toluene, ethylbenzene, and xylenes
Chemox	chemical oxidation
DO	dissolved oxygen
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
GCL	groundwater cleanup level
gpm	gallons per minute
GRO	gasoline range organics
Klozur <sup>®</sup> One	Trademarked chemical oxidizer developed by PeroxyChem
mg/L	milligrams per liter
mV	millivolt
MW	monitoring well
PAH	polycyclic aromatic hydrocarbon
PQL	practical quantitation limit
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
TMB	Trimethylbenzene
μs/cm	microSiemens per centimeter
UST	underground storage tank
VOC	Volatile Organic Compounds

## 1.0 EXECUTIVE SUMMARY

This second quarter 2021 Monitoring Event Report was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Speedway, LLC for Speedway Store 5325 (formerly Tesoro 2 Go Mart #52), located at 7172 West Parks Highway, Wasilla, Alaska (Figure 1). The methods used for this monitoring event were conducted in accordance with the Alaska Department of Environmental Conservation (ADEC) approved 2021 Corrective Action Work Plan for this site.

This monitoring event was conducted on May 18, 2021, by the Stantec environmental staff who included: John Marshall, Environmental Scientist, and Austin Badger, Engineer In Training.:

- Measuring depth to groundwater
- Measuring field intrinsic water quality parameters
- Checking operation of the in-situ remediation system
- Collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, G-7, MW 16-2 and Remediation Well RW 16-1 (Figure 2).

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring well:

- Remediation Well RW 16-1: Ethylbenzene, xylenes, diesel range organics (DRO), gasoline range organics (GRO), 1,2,4 trimethylbenzene, and 1,3,5 trimethylbenzene. Benzene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs).
- Monitoring Well MW G-3: DRO.
- The naphthalene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs) in all of the wells sampled

The hydraulic gradient across the site was found to be approximately 0.020 feet per foot directed toward the south at 182 degrees; however, the hydraulic flow of the groundwater does not take into account the groundwater level in MW G-1 since this well receives influent pumped from the air-lift well described in the following paragraph. The groundwater gradient and flow direction are generally consistent with past monitoring events.

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system that includes of an air-lift well (see Figure 3), was inspected to determine operational condition. The VSC compressor that operates the air-lift well was operational and observed to be discharging to the recirculation/receiving well (MW G-1).

In addition, a chemox injection into the groundwater table via remediation wells RW 20-1 and RW 20-2 was completed during the monitoring event. A total of 220 pounds of Kloxur One<sup>®</sup> and approximately 500 gallons of clean water from the store's water system was injected.

## 2.0 SITE BACKGROUND

Background information for this site is summarized in Appendix A.

## 3.0 FIELD ACTIVITIES

The following field activities were conducted during the first quarter 2021 groundwater monitoring event:

- Measured the depth to groundwater in monitoring wells G-1, G-3, G-4, G-5, G-7, MW16-2, and remediation well RW16-1.
- Measured the following intrinsic water quality parameters in all wells sampled except for MW G-4: temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance.
- Checked the operation of the VSC treatment system.
- Collected groundwater samples from monitoring wells G-1, G-3, G-5, G-7, MW16-2, and remediation well RW16-1 and submitted them for laboratory analysis for the following: GRO by Alaska Test Method (AK)101; DRO by AK102; and select petroleum associated volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Test Method 8260C; and sodium by Metals (ICP) by Method 6010C.

Field methods and procedures are provided in Appendix B and field measurements and notes are provided in Appendix C.

## 4.0 GROUNDWATER MONITORING RESULTS

### 4.1 GROUNDWATER ELEVATIONS

Table 1 presents groundwater elevations at this site based on the depths to static groundwater levels measured during this monitoring event.

**Table 1 Groundwater Elevations**  
Measured on May 18, 2021

Monitoring Well Identification	Top of Casing Elevation <sup>1</sup> (feet)	Depth to Water (feet btoc)	Groundwater Elevation (feet)
G-1 <sup>2</sup>	99.49	2.25	97.24
G-2	99.26	NM	NC
G-3	99.13	34.41	64.72
G-4	98.29	35.80	62.49
G-5	101.42	38.88	62.54
G-7	99.57	38.61	60.96
RW 16-1	99.45	33.32	66.13
MW 16-2	99.23	32.93	66.30

Key:

1 – G-1, G-2, G-3, G-4, G-5, G-7, RW16-1, and MW16-2 surveyed in October 2019. Elevations are presented in respect to a local benchmark with 100-foot datum.

2 – Air lift pump discharge causes groundwater elevation to fluctuate. An average groundwater elevation is reported.

btoc – below top of casing; NM – Not measured; NC – Not Calculated

The hydraulic gradient across the site was found to be approximately 0.020 feet per foot directed toward the south at 182 degrees; however, the hydraulic flow of the groundwater does not take into account the groundwater level in MW G-1 since this well receives influent pumped from the air-lift well described in the following paragraph. The groundwater gradient and flow direction are generally consistent with past monitoring events.

## 4.2 FIELD PARAMETERS

Temperature, pH, DO, ORP, and specific conductance were measured following purging of the sampled wells. Monitoring and remediation wells were purged of three well volumes or until purged dry and allowed to recharge prior to sampling. Results of water quality parameter testing are presented in Table 2.

**Table 2 Field Parameters**

Measured on May 18, 2021

Monitoring Well Identification	Purged Volume (gallons)	Temp. (°C)	pH	DO (mg/L)	ORP (mV)	SC (µs/cm°C)
G-1	NA	10.4	7.10	4.87	189.9	249.9
G-3	4.5	4.9	6.86	0.64	141.6	558.1
G-5	1.23	6.2	6.64	1.13	179.2	530.9
G-7	1.41	5.9	6.30	10.03	168.1	284.2
RW16-1	1.5	5.4	10.27	13.06	138.0	656.8
MW16-2	2.30	4.9	7.38	6.49	161.8	546.3

Key:

°C – degrees Celsius

µS/cm°C – microSiemens per centimeter °C

DO – dissolved oxygen

mg/L – milligrams/liter

mV – millivolts

NM – not measured

NA – not applicable

ORP – oxidation-reduction potential

pH – -log [H<sup>+</sup>]

SC – specific conductance

Temp. – temperature

A typewritten copy of the sampler's field measurements and notes are provided as a worksheet in Appendix C.

## 4.3 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Pace Analytical Laboratory performed all analysis of groundwater samples for this sampling event. Historical monitoring data for this site are presented in Appendix D. Laboratory analytical results are summarized in Table 3. The laboratory analytical report is provided in Appendix E.

Monitoring Wells G-1, G-3, G-5, G-7, MW 16-2 and remediation well RW 16-1 were sampled in accordance with the 2021 Corrective Action Work Plan. Results of the analytical sampling showed that benzene, ethylbenzene, xylenes, DRO, GRO, 1,2,3 Trimethylbenzene, 1,3,5 Trimethylbenzene concentrations exceeded the GCLs in remediation well RW16-1. In addition, the DRO GCL was exceeded in MW G-3. Although the results shown in Table 3b for naphthalene were reported as undetected, the laboratory reporting detection level for naphthalene exceeded the GCL for all of the wells sampled; hence the results are shown in bold print.

**Table 3a Groundwater Analytical Results for BTEX, GRO, and DRO**  
Samples collected on May 18, 2021

Sample Identification	Benzene <sup>1</sup> (mg/L)	Toluene <sup>1</sup> (mg/L)	Ethylbenzene <sup>1</sup> (mg/L)	Xylenes <sup>1</sup> (mg/L)	GRO (mg/L)	DRO (mg/L)
G-1	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	0.0152 B,J (0.100)	0.405 J (0.840)
G-3	U (0.00100)	U (0.00100)	0.00111	0.00102 J (0.00200)	1.36	<b>8.48</b>
G-5	U (0.00100)	U (0.00100)	0.00170	U (0.00200)	0.0693 B,J	U (0.800)
G-7	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	0.0320 B,J (0.100)	U (0.800)
RW16-1	<b>U (0.200)</b>	U (0.200)	<b>0.761</b>	<b>4.80</b>	<b>3.38</b>	<b>7.24</b>
MW16-2	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	0.419	U (0.800)
DUP-01 (duplicate of MW16-2)	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	0.751	U (0.840)
Trip Blank	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	NT	NT
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>



**Table 4b Groundwater Analytical Results Naphthalene, Trimethylbenzene (TMB) and Sodium**

Samples collected on May 18, 2021

Sample Identification	Naphthalene (mg/L)	1,2,4-TMB (mg/L)	1,3,5-TMB (mg/L)	Sodium (mg/L)
G-1	U (0.00500) C3	U (0.00100)	U (0.00100)	16.4
G-3	U (0.00500) C3	0.0452	0.0457	32.2
G-5	U (0.00500) C3	U (0.00100)	0.000191 J (0.00100)	13.9
G-7	U (0.00500) C3	U (0.00100)	U (0.00100)	9.55
RW16-1	U (1.00) C3	<b>2.50</b>	<b>0.530</b>	24.1
MW16-2	U (0.00500) C3	0.0110	0.0103	4.72
DUP-01 (duplicate of MW16-2)	U (0.00500) C3	0.0174	0.0143	4.86
Trip Blank	U (0.00500) C3	U (0.00100)	U (0.00100)	NT
GCLs	<b>0.0017</b>	<b>0.056</b>	<b>0.060</b>	NA

**Key**

J – The identification of the analyte is acceptable; the reported value is an estimate

1 - Analyzed by U.S. Environmental Protection Agency Method 8260C

Dup-01 - Duplicate Sample of MW16-2

AK - Alaska Test Method

DRO – Diesel range organics, analyzed by AK102

GCLs - Groundwater cleanup levels, per Alaska Department of Environmental Conservation 18 Alaska Administrative Code 75.345, Table C, updated September 29, 2018.

GRO – Gasoline range organics, analyzed by AK101

mg/L – Milligrams per liter

U – Undetected above practical quantitation limits shown in parentheses

C3 – The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.

NT – Not Tested

**Bold** - indicates the concentration exceeds the GCL or, if not detected, the practical quantitation limit exceeds the GCL.

NA – Not Applicable

#### 4.4 QUALITY ASSURANCE (QA)/QUALITY CONTROL (QC) REVIEW

Laboratory QC data and the ADEC Laboratory Data Review Checklist are included with the laboratory report in Appendix E.

A duplicate sample set was collected to determine the precision of the field collection and laboratory analysis for the sampling event. Sample Dup-01 is a duplicate of Sample MW16-2. Data presented in Table 4 show that the precision for the duplicate sample set (analytes that were detected above the practical quantitation limit [PQL] and exceeded GCLs) was within the established QA criteria tolerances for GRO. Precision could not be calculated for benzene, toluene,



xylene, ethylbenzene and DRO because they were not detected above the PQL in one or more samples. The holding times for GRO, DRO, and VOCs were within established criteria.

**Table 5 Laboratory Quality Control Objectives**

Quality Control Designation	Tolerance	Results for this Event
<b>Holding Times</b>		
DRO/Water/to analyze	40 days	10 days <sup>1</sup>
DRO/Water/to extract	14 days	10 days
GRO/Water/to analyze	14 days	5 days <sup>2</sup>
VOCs/Water/to analyze	14 days	10 days
<b>Field Duplicates – Precision</b>		
Benzene/Water	± 30%	NC
Toluene/Water	± 30%	NC
Ethylbenzene/Water	± 30%	NC
Xylenes/Water	± 30%	NC
GRO/Water	± 30%	19 %
DRO/Water	± 30%	NC

Key:

% – percent

± – plus or minus

DRO – diesel range organics

GRO – gasoline range organics

NC – Not calculated because the analyte was not detected above the practical quantitation limit in one or more sample

VOCs – volatile organic compounds

1 – DRO in samples G-03 and RW16-01 were analyzed 14 days from collection.

2 – GRO in samples G-01 and RW16-01 were analyzed 14 days from collection.

## 5.0 REMEDIATION SYSTEM

The on-site groundwater treatment process consists of a VSC system and periodic injections of a chemox solution into the groundwater table. The chemox solution consists of water and an oxidant product commercially referred to as Kloxur One<sup>®</sup>, which is a sodium persulfate compound. Historically, the chemox solution was injected into the formation via remediation well RW 16-1. In October 2020, Stantec completed the installation and development of two 4-inch diameter chemox injection wells, RW 20-1 and RW 20-2, located approximately 10-feet north (upgradient) of remediation well RW 16-1 (Figure 3).

Chemox injection took place on May 18, 2021, during the completion of the groundwater monitoring event. Stantec completed an injection of two 55-pound bags of Kloxur One<sup>®</sup> product mixed with 50 gallons of water injected into each of the two remediation/injection wells for a total 220 pounds of Kloxur One<sup>®</sup> and approximately 100 gallons of clean water from the store's water system. Following the chemox injection, 200 gallons of water was injected into each well as a means to provide a "hydraulic push" to dose the chemox solution into the groundwater table with the goal of increasing contact between the chemox solution and contaminants within the subsurface

soil and groundwater formation. The next scheduled injection of chemox into the treatment wells is planned for the third quarter of 2021.

The layout of the on-site VSC system and location of RW 20-1 and RW 20-2 are shown on Figure 3. The VSC compressor was operating in the normal range and operating the air-lift pump that discharges into the receiving well (MW G-1) for groundwater recirculation purposes as originally designed.

## **6.0 DISCUSSION OF FINDINGS**

### **6.1 GROUNDWATER HYDRAULIC CHARACTERISTICS**

The hydraulic gradient across the site was found to be approximately 0.020 feet per foot directed toward the south at 182 degrees; however, the hydraulic flow of the groundwater does not take into account the groundwater level in MW G-1 since this well receives influent pumped from the air-lift well described in the following paragraph. The groundwater gradient and flow direction are generally consistent with past monitoring events.

### **6.2 GROUNDWATER QUALITY**

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring well:

- Remediation Well RW 16-1: Ethylbenzene, xylenes, diesel range organics (DRO), and gasoline range organics (GRO). Benzene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs).
- Monitoring Well MW 16-2: GRO.
- The naphthalene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs) in all of the wells sampled.

All historic data for benzene, toluene, ethylbenzene, and xylenes (BTEX), GRO, DRO, and groundwater elevations for the monitoring wells associated with this site are tabulated in Appendix D.

### **6.3 REMEDIATION SYSTEM**

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system (see Figure 3) was inspected to determine operational condition. The VSC compressor was operating in the normal range and operating the air-lift pump that discharges into the receiving well (MW G-1) for groundwater recirculation purposes as originally designed.

Chemox injection took place on May 18, 2021, during the completion of the groundwater monitoring event. Stantec completed an injection of two 55-pound bags of Klozur One® product

mixed with 50 gallons of water injected into each of the two remediation/injection wells for a total 220 pounds of Klozur One® and approximately 100 gallons of clean water from the store's water system. Approximately 400 gallons of clean water from the store's water system was injected into the two wells to flush the chemox solution into the groundwater table.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

No anomalies were found during this first quarter 2021 monitoring event that require additional corrective action or changes to the approved year 2021 Corrective Action Work Plan for this site.

## **8.0 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). No other warranty, expressed or implied, is made. Data and recommendations made herein were prepared for Speedway, LLC for Speedway Store 5325 (former Tesoro 2 Go Mart #52). Information herein is for use at this site in accordance with the purpose of the report described.

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## FIGURES

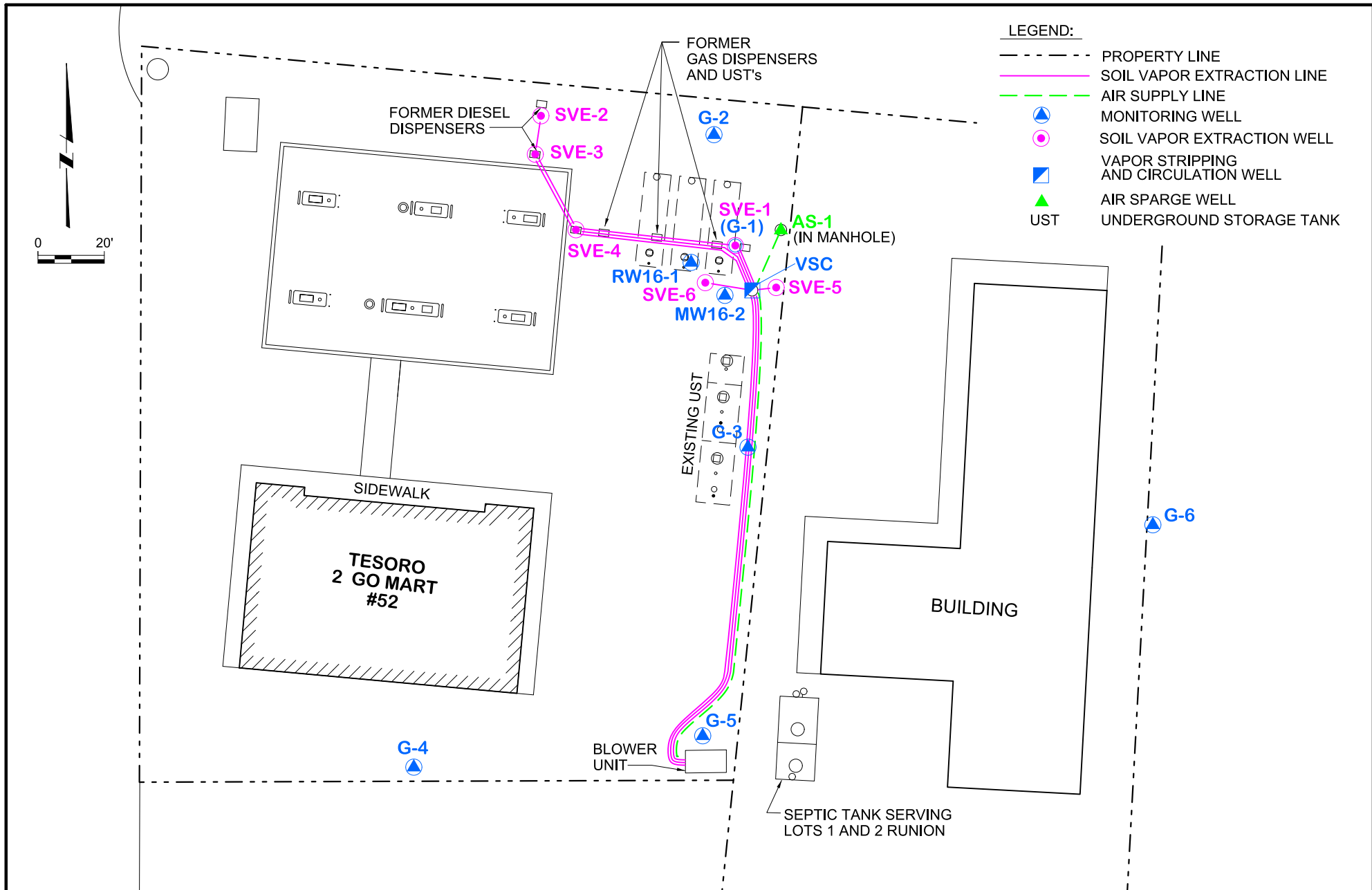
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| Figure 1 | Location and Vicinity Map                                    |
| Figure 2 | Site Plan with Groundwater Elevations and Analytical Results |
| Figure 3 | Remediation System Layout                                    |
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## **APPENDIX A**

### *Site Background*

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## APPENDIX A – SITE BACKGROUND

**Tesoro 2 Go Mart #52** (Mile 49 Parks Highway, Wasilla, Alaska)  
**ADEC Facility ID #648; ADEC File #2265.26.006**

**September 1996.** During the removal of the former underground storage tank (UST) fueling system (consisting of several fuel dispensers, two 12,000-gallon gasoline, and one 12,000-gallon diesel USTs) on September 7, 1996, petroleum contamination was encountered in the surrounding soil. Gilfilian Engineering conducted the UST site assessment work. Approximately 240 cubic yards of gasoline and 60 cubic yards of diesel contaminated soil was excavated and treated at Alaska Soil Recycling.

**February 1997.** The Alaska Department of Environmental Conservation (ADEC) reviewed the UST Closure Site Assessment Report prepared by Gilfilian Engineering. Subsequently, a Release Investigation (RI) Work Plan prepared by Gilfilian Engineering was approved by ADEC.

**April 1997.** The findings of the RI (later referred to as Phase I RI) showed high levels of diesel contamination under the diesel dispenser islands and gasoline contamination under the unleaded gasoline UST to 36 feet below ground surface (bgs). The RI included drilling five soil borings and installing and sampling one groundwater monitoring well (identified as G-1). Groundwater was also found to be contaminated. Subsequently, an ADEC-approved work plan was prepared by Gilfilian Engineering for Phase II RI.

**December 1997.** Phase II RI report submitted to ADEC. The RI included drilling soil borings and installing and sampling four groundwater monitoring wells (G-2, G-3, G-4 and G-5).

**April 1998.** ADEC approved the installation of a Soil Vapor Extraction (SVE) system.

**June 1998.** Gilfilian Engineering submitted a Well Search report to ADEC. The well search targeted an area of 0.25-mile radius centered on the gas station site.

**July 1998.** ADEC approved the work plan prepared by Gilfilian Engineering for a Phase III RI.

**August 1998.** A Phase III RI was completed at the site by Gilfilian Engineering. The RI included installing and sampling three groundwater monitoring wells (G-6, G-7, and G-8).

**January 2002.** Several “rising and falling head hydraulic conductivity tests” (slug tests using the Hvorslev method) were performed by Gilfilian Engineering on January 9, 2002. The hydraulic conductivity at Monitoring Wells G-4 and G-7 exceeded 171 feet/day. Based on the high hydraulic conductivity values, Gilfilian Engineering recommended a pilot test to determine the effectiveness of treating the groundwater with a vapor stripping and circulation (VSC) well.

**March/April 2002.** One soil boring was drilled on March 6, 2002, for installation of a VSC well. Benzene, toluene, ethylbenzene, and xylenes (BTEX), gasoline range organics (GRO), and diesel range organics (DRO) tested in soil samples collected from the soil boring were detected above

ADEC soil cleanup levels (SCLs). In addition, a second soil boring was drilled for installation of an air sparge (AS) well that was designated AS-1. Benzene, ethylbenzene, and GRO were detected above SCLs and BTEX and GRO were above the ADEC groundwater cleanup levels (GCLs) in AS-1. Pilot testing conducted in March and April 2002 showed the hydrogeological formation could not provide adequate water to operate a VSC or AS system at this site. Continued operation of the SVE system only was recommended, and the VSC well was subsequently connected to the SVE system.

**June 2002.** The SVE system was re-started on June 25, 2002 and was set to withdraw vapors from Wells SVE-1, SVE-5, and SVE-6. A significant increase in the volatile contaminant concentrations to 139 parts per million by volume (ppmv) as measured by a photoionization detector (PID), was noted in the SVE system discharge. By July 3, 2002, the volatile levels dropped to 58.5 ppmv, which was possibly related to the significant decrease in the thickness of free product measured in Monitoring Well G-1 (SVE-1).

**December 2002.** An SVE pilot study using a 5-horsepower FL-707 Rotron blower was conducted on December 19, 2002. The purpose was to determine if the use of a larger capacity blower would increase the recovery of volatile petroleum contaminants. The dramatic rise in PID readings during the second quarter of 2002 is attributed to the addition of SVE Wells 5, 6, and VSC.

**October 2003.** A 1-horsepower air compressor was installed for operation of the AS system. The AS well (AS-1) was previously installed at the site in 2002. The VSC manhole was reconfigured to enhance SVE system performance.

**July 2004.** The AS system was converted into a VSC system for pilot testing on July 21, 2004. Down well piping was installed in Monitoring Well VSC and connected to the compressor air supply line. Pilot testing indicated the system could be an effective groundwater treatment option. The AS compressor was removed from the site for maintenance.

**September 2, 2004.** The VSC system was activated following ADEC approval. The VSC system was treating approximately 1 gallon of contaminated groundwater per minute, or 1,440 gallons per day. The treated water was transferred (pumped by air) from the VSC well to Monitoring Well G-1 for circulation.

**October 2007.** Ten confirmation soil borings (CSB-1 through CSB-10) were installed on October 3 through 9, 2007, near the former USTs and areas of previous investigations across the site. Benzene, ethylbenzene, xylenes, GRO, and DRO were detected above the SCLs in two or more borings. Toluene was the only analyte not detected above the SCLs in any soil boring.

**September 2008.** Three chemical oxidation applications were completed by MWH Americas, Inc. (MWH). Sampling of groundwater monitoring wells noted benzene, ethylbenzene, and GRO detected above the GCLs in Monitoring Well G-3.

**February 2009.** Monitoring Well G-3 showed a consistent trend in increased hydrocarbon concentrations, and a fine sediment with a hydrocarbon odor was found in the bottom of the

monitoring well. MWH recommended that the well be re-developed to remove the sediment build-up.

**March 2009.** Monitoring Well G-3 was redeveloped to remove the dark colored sediment. The sediment was noted to have a slight petroleum odor and heavy sheen.

**January/June/August 2010.** MWH performed potassium permanganate chemical oxidation treatments on January 27 and 28, June 11, and August 20, 2010. A solution of 3 percent potassium permanganate (180, 646, and 767 gallons, respectively) was injected into several groundwater monitoring wells.

**October 30, 2012.** The chemical oxidant Klorur CR<sup>®</sup> was injected into three on-site wells (Monitoring Well G-1 and SVE Wells SVE-5 and SVE-6). The Klorur CR<sup>®</sup> injection process was conducted to test the use of the existing remediation infrastructure for a means of delivering the chemical oxidant into the contaminated groundwater aquifer at the site, as well as evaluating the effectiveness of the chemical oxidant.

**October 2012.** Groundwater sample results were non-detect in all four monitoring wells sampled. The water table was considerably higher than normal, and the absence of dissolved contaminants was assumed to be associated with the high water table. The last time a high water table was observed was in October 2006, and the concentrations were all non-detects in all monitoring wells except for G-3, which was lower than historical concentrations at that time.

**January 30, 2013.** DRO was detected in Monitoring Wells G-1, G-3, and G-7, and toluene, ethylbenzene, and xylenes were detected in G-3 – with all analytes below the GCLs. The water table was higher than normal, and the concentrations detected were not believed to be indicative of the groundwater conditions at the site.

**December 19, 2013.** A chemical oxidation application of Klorur CR<sup>®</sup> was injected into three on-site wells: Monitoring Well G-1 and Remediation Wells SVE-5 and SVE-6.

**February 2014.** Groundwater sampling showed contaminant levels in all monitoring wells that were sampled remained below the GCLs for the last seven monitoring events.

**May 2014.** DRO was detected in Monitoring Well G-3 at 3.3 milligrams per liter (mg/L), exceeding the GCL for the first time since February 2011. The remediation system was operating on a full-time basis.

**October 2014.** Groundwater sampling showed contaminant levels in all monitoring wells were below GCLs. The remediation system was operating on a full-time basis.

**February 2015.** GRO and DRO were detected at 4.8 and 12 mg/L, respectively, in Monitoring Well G-3. All other analytes were below GCLs. Remediation system operating on full-time basis.

**May 2015.** GRO was detected at 2.6 mg/L in the duplicate sample collected from Monitoring Well G-3, the primary and all other analytes were below GCLs.

**September 2015.** Groundwater sampling showed contaminant levels in all monitoring wells were below GCLs. The remediation system was operating on a full-time basis.

**October 2015.** Three CSBs were installed by MWH to investigate the extent of any remaining soil contamination at the site. Two areas were investigated: the former diesel dispensers and the former gas dispensers and USTs. Soils encountered in the area of the former diesel dispensers had elevated headspace field screening results; however, DRO concentrations were below laboratory practical quantitation limits (PQLs). Soils encountered in the area of the former gas dispensers and USTs had detectable concentrations of GRO and one exceedance above the SCLs established for the site. Soil GRO contamination was limited to below the current groundwater level at the site. Similar observations were documented in 2007. Analytical results collected from the 2015 CSBs indicate that concentrations of petroleum contamination remaining at the site are generally decreasing when compared to the analytical results from the 2007 CSBs. Future management strategies at the site may include targeted chemical oxidation in the area of the former gas dispensers and USTs as represented by CSB 9-3, with no further cleanup action at the former diesel dispensers.

**November 2015.** GRO was detected at 3.2 mg/L in Monitoring Well G-3. An analytical sample was collected from the VSC well which indicated all analytes were below GCLs for the first time since September 2004. The remediation system was offline upon arrival at the site and remained offline pending groundwater conditions and further analytical sampling.

**January 2016.** The first quarter 2016 monitoring event was conducted on January 28, 2016. Results of the analytical sampling showed that all analytes were below GCLs, except GRO concentrations in Monitoring Well G-3. One or more analytes were detected above the PQLs in all the monitoring wells sampled, except Monitoring Well G-5. Analytical results from Remediation Well VSC were below PQLs.

**May 2016.** The second quarter 2016 monitoring event was conducted on May 9, 2016. All analytes were below the GCLs, only Monitoring Well G-3 had analytes detected above PQLs. Monitoring Wells G-2 and G-5 had insufficient water for sampling.

Four CSBs were placed at four locations surrounding the 2015 CSB 9-3, to the north, south, east, and west. Two discrete analytical soil samples were collected from CSB 16-1, CSB 16-2, and CSB 16-4, and one sample from CSB 16-3. These samples were collected from the locations with the highest PID readings, or at the water table interface if no detections were observed in field screened samples.

CSB 16-1 and CSB 16-2 (Samples CSB 16-1 38 and CSB 16-2 39), which were the closest to the former USTs and located to the north and east of 2015 CSB 9-3, respectively, both had GRO exceedances similar to the findings of the nearby 2015 Boring CSB 9-3. All the samples which exceeded SCLs were below the water table that was measured at a depth of 35.48 feet btoc in nearby Monitoring Well G-3 at the time of drilling. Analytical results at the water table interface at three locations were below laboratory PQLs. The CSB 16-3 and CSB 16-4, located at a greater

distance from the former USTs compared to CSB 16-1 and CSB 16-3 and to the south and west of 2015 CSB 9-3, did not have analyte exceedances. Soil Borings CSB 16-1 and CSB 16-2 were completed with PVC riser and screen assemblies to provide future access points for monitoring and/or remediation activities.

**October 2016.** The third quarter 2016 monitoring event took place on October 24, 2016. All wells listed in the 2016 Work Plan to be sampled in the third quarter had sufficient water for sampling. Monitoring Well G-3 had GRO detected above GCL. New Wells RW16-1 and MW16-2 were sampled for the first time. Remediation Well RW16-1 had all analytes, except benzene and toluene, detected above their GCLs. Monitoring Well MW16-2 had analytes detected above PQLs, but none above GCLs. The VSC system was not operating.

**December 2016.** The fourth quarter 2016 monitoring event took place on December 9, 2016. All wells listed in the 2016 Work Plan to be sampled in the fourth quarter had sufficient water for sampling. Monitoring Well G-3 had GRO detected above GCL (update effective November 6, 2016). Drinking water samples had no detections above PQLs. The VSC system was not operating.

**February 2017.** The first quarter 2017 monitoring event took place on February 8, 2017. Monitoring Wells G-1 and G-3 purged dry and did not recover sufficiently to allow for sampling. Monitoring Well G-5 was dry upon arrival at the site. Remediation Well RW16-1 and Monitoring Well MW16-2 were sampled. Ethylbenzene, xylenes, GRO, and DRO were detected above GCLs in both wells. The VSC system remained off-line due to low groundwater conditions and/or frozen circulation line. The SVE treatment system was not operational and will require maintenance to the blower system following spring breakup.

**April and May 2017.** The second quarter 2017 monitoring event took place on April 25, 2017. Analytes were detected above their GCLs in Monitoring Wells G-3, G-5, and MW16-2, and Remediation Well RW16-1. These wells had exceedances of specific volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) consisting of 1,2,4- and 1,3,5-trimethylbenzene compounds and naphthalene.

Routine maintenance was conducted on the SVE and VSC systems, but due to unresolved electrical power/control issues, both systems are currently not operating until additional corrective action services are provided by an electrician.

Also, representative water samples were collected from the domestic water systems serving the existing buildings on Lots 1, 3 and 4 in Runion Subdivision, and were analyzed for public drinking water VOCs and DRO. No detectable levels of contaminants were found in any of the domestic drinking water wells.

On May 3, 2017, the first phase of the pilot test was initiated with an injection of a chemical oxidant (chemox) consisting of Kloxur CR<sup>®</sup> into the new Remediation Well RW16-1. The pilot test will be continued during the third and fourth quarters of 2017, when the wells will be resampled to determine the impact of the chemox injection. Subject to the findings of the 2017 monitoring events, the pilot test may be continued in 2018 with several more injections of Kloxur CR<sup>®</sup>.

**October 2017.** The fourth quarter 2017 monitoring event took place on October 20, 2017. DRO was detected above the GCL in Monitoring Well G-3. Analytes detected above their GCLs in MW16-2 included: ethylbenzene, GRO, naphthalene, and 1,2,4-trimethylbenzene.

The SVE and VSC treatment systems were not operating due to electrical control systems malfunctions. The treatment systems are scheduled for replacement and/or upgrade in 2018.

The pilot test program for the chemox injection was initiated in May 2017 in accordance with the ADEC approved work plan for the 2017 Work Plan Task 3. The test results for intrinsic parameters measured during the October 2017 monitoring event indicate no unusual findings and will be monitored in future quarterly monitoring events scheduled for 2018 with additional applications of Klozur CR<sup>®</sup> into Remediation Well RW16-1.

**February 2018.** The first quarter 2018 monitoring event took place on February 13, 2018. Analytes detected above their GCLs included ethylbenzene and GRO in Monitoring Well MW16-2 and DRO in Monitoring Well G-3.

The SVE treatment system was off-line pending repairs. The operation of the VSC system was interrupted in the second quarter of 2017 relating to an issue with the variable frequency drive on the compressor and will be brought back online when the system can be evaluated by a licensed electrician.

Ongoing monitoring of sodium and total organic carbon, relating to the May 2017 chemical oxidation pilot test, showed elevated concentrations of both analytes in Monitoring Well G-3. Conductivity was also found to be elevated in Monitoring Well G-1, which may also indicate the presence of residual chemical oxidant.

**August 2018.** The third quarter monitoring event took place on August 17, 2018. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeding the GCLs for: DRO in Monitoring Wells G-1 and G-3; GRO in Monitoring Well 16-2, and ethylbenzene, xylenes, GRO, and DRO in Remediation Well 16-1.

Several analytes for VOCs and polynuclear aromatic hydrocarbons (PAHs) were reported as undetected but had laboratory reporting limits that equaled or exceeded their corresponding GCLs. These undetected analytes were noted in all the wells that were sampled.

Also, representative water samples were collected from the domestic water systems serving the existing buildings on Lots 1&2, 4, and 5 in Runion Subdivision, and were analyzed for public drinking water VOCs. All the domestic drinking water wells were found to have no detectable levels of contaminants of concern.

The SVE and VSC treatment systems are not operating pending future repairs and/or modifications to the electrical systems which will be evaluated by a licensed electrician.

**October 2018.** The fourth quarter groundwater monitoring event was conducted on October 25, 2018. The monitoring event included measuring depth to water, field intrinsic water quality



parameters, and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, G-7, and MW16-2. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeding the GCLs for: DRO in Monitoring Well G-3; and 1,2,4-trimethylbenzene in Monitoring Well 16-2.

The VSC treatment system is currently operating and pumping, via the air-lift pump, approximately 2 to 3 gallons per minute on a continuous basis. During the 3<sup>rd</sup> quarter of 2018, Stantec completed a chemox injection Klozur One<sup>®</sup>. Fifty-five pounds of Klozur One<sup>®</sup> was mixed with approximately 100 gallons of clean water. The chemox solution was injected into Remediation Well RW 16-1.

**February 2019.** The first quarter 2019 monitoring event took place on February 26, 2019. The monitoring event included measuring depth to water, field intrinsic water quality parameters, and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, G-7, and MW16-2. The depth to water and field intrinsic water quality parameters were also measured in Remediation Well RW16-1. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeding the GCLs for: DRO in Monitoring Well G-3 and GRO in Monitoring Well 16-2.

The VSC and SVE treatment systems were found to be off (inoperative) upon arrival at the site due to an apparent power surge. Upon restart of the systems, the recirculation line was found to be frozen. The VSC and SVE systems were left off until spring thaw.

**April 2019.** The second quarter 2019 groundwater monitoring event was conducted on April 23 and 24, 2019. The monitoring event included measuring depth to groundwater and field intrinsic water quality parameters and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-2, G-3, G-4, G-5, G-7, and MW16-2 and Remediation Well RW16-1.

Based on the groundwater depth measurements, the average hydraulic gradient was determined to be flowing to the south at a bearing of 183 degrees with a gradient of 0.02 feet per foot. Groundwater flow direction and gradient was noted to be consistent with the historical results for this site.

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the GCLs for the following monitoring wells:

- Monitoring Well G-3 –DRO, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene
- Monitoring Well MW16-2 –GRO, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene

Representative water samples were also collected from the domestic water systems serving the existing buildings on Lots 1&2, 4, and 5 in Runion Subdivision, and were analyzed for drinking water analyses and DRO. All the domestic drinking water wells were found to have no detectable levels of contaminants of concern.

During this monitoring event, the on-site groundwater remediation system, consisting of a VSC system was inspected to determine its operational condition. The VSC treatment system was found

to be off (in-operative) upon arrival at the site due to an apparent power surge. The VSC system was left off until such time the electrical supply system could be evaluated to determine the cause of the power outages to the VSC compressor.

**July 2019.** The third quarter 2019 groundwater monitoring event was conducted on July 16, 2019. The monitoring event included measuring depth to groundwater and field intrinsic water quality parameters and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, G-7, and MW16-2. In addition, depth to groundwater was measured at Monitoring Well G-4 and Remediation Well RW16-1 and field intrinsic water quality parameters were measured at Remediation Well RW16-1.

Based on the groundwater depth measurements, the average hydraulic gradient was determined to be flowing to the south at a bearing of 300 degrees with a gradient of 0.011 feet per foot. Groundwater flow direction and gradient were noted to be inconsistent with the historical results for this site. The change in groundwater flow may be a result of elevation changes due to “frost jacking” of the well casings on one or more monitoring wells that were noted during the sampling event. The elevations of the wells will be resurveyed during the 4<sup>th</sup> quarter monitoring event.

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the GCLs for the following monitoring wells:

- Monitoring Well G-1 –DRO
- Monitoring Well G-3 –DRO
- Monitoring Well MW16-2 –GRO

The VSC groundwater treatment system was found to be off (inoperative) upon arrival at the site due to an apparent power surge. On a subsequent site visit conducted during the week of July 22, the VSC compressor was activated and currently remains operational. On July 25, 2019, Stantec injected a chemox solution consisting of 55 pounds of Kloxur One® via a pressurized pump system into the remediation well RW 16-1.

**October 2019.** The fourth quarter 2019 groundwater monitoring event was conducted on October 17, 2019. The monitoring event included measuring depth to groundwater and field intrinsic water quality parameters and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, G-7, and MW16-2. In addition, depth to groundwater was measured at Monitoring Well G-4.

Based on the groundwater depth measurements, the average hydraulic gradient was determined to be flowing to the southwest at a bearing of 221 degrees with a gradient of 0.022 feet per foot. Groundwater flow direction and gradient were noted to be consistent with the historical results for this site. The elevations of the wells were resurveyed during this monitoring event.

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the GCLs for the following monitoring wells:

- Monitoring Well G-3: DRO
- Monitoring Well MW16-2: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene

The VSC groundwater treatment system was found to be operating within the normal range of performance with the production of 1 to 2 gallons per minute of recirculated groundwater with an air lift pump in the VSC well. Stantec injected a chemox solution consisting of 55 pounds of Klozur One® via gravity flow into the remediation well RW 16-1.

**August 2020.** This third quarter 2020 Monitoring Event Report was conducted on August 12, 2020 and included the following tasks: Measuring depth to groundwater, measuring field intrinsic water quality parameters, checking the operation of the in-situ remediation system, and collecting and analyzing groundwater samples from Monitoring Wells G-1, G-3, G-5, MW16-2, and remediation well RW16-1.

Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring wells:

- Remediation Well RW16-1: Ethylbenzene, xylenes, diesel range organics (DRO), and gasoline range organics (GRO)

Based on the groundwater depth measurements and the elevation survey of the tops of the monitoring wells, the average hydraulic gradient was determined to be flowing to the south-southeast at a bearing of 171 degrees with a gradient of 0.018 feet per foot. Groundwater flow direction and gradient were noted to be consistent with the historical results for this site.

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system was inspected to determine operational condition. The VSC compressor that operates the air-lift well was not operating due to a recent power outage. The compressor was activated and the flow from the air-lift well was adjusted to provide a constant flow of approximately 1 to 2 gallons per minute of aerated groundwater that is discharged into MW-1 for recirculation.

**October 2020.** This fourth quarter 2020 Monitoring Event was conducted on October 2, 2020. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring well:

- Remediation Well RW16-1: Ethylbenzene, xylenes, diesel range organics (DRO), and gasoline range organics (GRO).

Analytical results by Test Method 545.1 (see Appendix E) showed no evidence of contamination for the on-site and nearby drinking water wells serving the following properties: Runion Subdivision Lots 1 and 2, Runion Subdivision Lot 4, and Runion Subdivision Lot 5.

Based on the groundwater depth measurements and the elevation survey of the tops of the monitoring wells, the average hydraulic gradient was determined to be flowing to the south-southwest at a bearing of 191 degrees with a gradient of 0.007 feet per foot. Groundwater flow direction and gradient were noted to be similar with the historical results but slightly lower gradient, as shown on the groundwater flow summary (“rose diagram”) presented on Figure 2.

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system (see Figure 3) was inspected to determine operational condition. The VSC compressor that operates the air-lift well was operational and providing adequate flow upon arrival on site.

On October 27, 2020 Stantec finished the installation and development of two 4-inch diameter chemox injection wells, RW 20-1 and RW 20-2, located north of Remediation Well RW16-1. On November 27, 2020 Stantec conducted the first 2020 injection of a chemox Klozur One® solution into the new chemox injection remediation wells, RW 20-1 and RW 20-2. The installation of the new wells will be described in a technical memorandum that will be submitted to ADEC.

**March 2021.** This first quarter 2021 monitoring event was conducted on March 31, 2021. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring/remediation wells:

- Remediation Well RW 16-1: Ethylbenzene, xylenes, DRO, and GRO. Benzene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs).
- Monitoring Well MW 16-2: GRO.

Due to limited data of groundwater elevations in measured wells and their linear positions across the site, the hydraulic gradient and flow direction of the groundwater table could not be calculated for this monitoring event.

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system (see Figure 3) was inspected to determine operational condition. The VSC compressor that operates the air-lift well was operational but the air-lift well was not checked to determine if the well was discharging to the recirculation/receiving well (MW G-1). The staff noted there was a significant ice plug at the top of MW G-1 which prevented access to the well.

**May 2021.** This first quarter 2021 monitoring event was conducted on March 31, 2021. Results of the analytical sampling showed petroleum hydrocarbon contaminant concentrations exceeded the groundwater cleanup levels (GCLs) for the following monitoring/remediation wells:

- Remediation Well RW 16-1: Ethylbenzene, xylenes, diesel range organics (DRO), gasoline range organics (GRO), 1,2,4 trimethylbenzene, and 1,3,5 trimethylbenzene. Benzene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs).
- Monitoring Well MW G-3: DRO.
- The naphthalene practical quantitation limits exceeded ADEC groundwater cleanup levels (GCLs) in all of the wells sampled

The hydraulic gradient across the site was found to be approximately 0.020 feet per foot directed toward the south at 182 degrees; however, the hydraulic flow of the groundwater does not take

into account the groundwater level in MW G-1 since this well receives influent pumped from the air-lift well described in the following paragraph. The groundwater gradient and flow direction are generally consistent with past monitoring events.

During this monitoring event, the on-site groundwater remediation system, consisting of a vapor stripping and circulation (VSC) system that includes of an air-lift well (see Figure 3), was inspected to determine operational condition. The VSC compressor that operates the air-lift well was operational and observed to be discharging to the recirculation/receiving well (MW G-1).

In addition, a chemox injection into the groundwater table via remediation wells RW 20-1 and RW 20-2 was completed during the monitoring event. A total of 220 pounds of Kloxur One® and approximately 500 gallons of clean water from the store's water system was injected.

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## **APPENDIX B**

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### *Field Methods and Procedures*

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## APPENDIX B – FIELD METHODS AND PROCEDURES

### Speedway Store 5325 (former Tesoro 2 Go Mart #52)

The following table presents the proposed tasks for the Alaska Department of Environmental Conservation (ADEC) approved 2021 Corrective Action Work Plan. The scope of these tasks is based on the results and findings of the monitoring and remediation completed to date at this site.

#### 2021 Work Plan Schedule for Speedway Store 5325 (Tesoro 2GoMart 52)

Work Plan Task 2021		1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter
Task 1	Monitoring Wells: G-1, G-3, G-5, G-7, RM 16-1, and 16-2	V, G, D, S & I	V, G, D, S, & I	V, G, D, S & I	V, G, D, P, S & I
	Monitoring Wells G-2 and G-4				V, G, D, P, S & I
	Drinking Water Wells serving Lots 1 and 2, Lot 4, and Lot 5 in Runion Subdivision				D & E
Task 2	O&M Air-Lift Well Remediation System	✓	✓	✓	✓
Task 3	Chemical Oxidation Treatment		✓	✓	✓

**Key:**

AK – Alaska Test Method

B – Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8021B.

D – Diesel range organics by AK102.

E – Drinking water parameters by EPA Method 524.1.

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.

O&M – operation and maintenance

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.

The Corrective Action Work Plan for the year 2021 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<sup>®</sup> 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 2021 Work Plan Schedule shown above.

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## **APPENDIX C**

### *Field Measurements and Notes*

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**Appendix C**  
**Field Measurements and Notes**

Project: Speedway Store 5325 (former TNS #52)  
Project Phase: 2Q21 GWM  
Project number: 185705363

Date: 5/18/2021  
Samplers: John Marshall, Austin Badger

Well ID	Volume Purged (gallons)	Sheen/Odor (Y or N)	Temp. (°C)	pH	(Downhole) Dissolved Oxygen(mg/L)	ORP (mV)	Specific Conductance (µs/cm°C)	Top of Casing* (feet)	Depth to GW (feet btoc)	Total Depth (feet)	GW Elev. (feet datum)
G-1	NA	N/N	10.4	7.10	4.87	189.9	249.9	99.49	2.25	-	97.24
G-2	-	-	-	-	-	-	-	99.26	-	-	-
G-3	4.50	Y/Y	4.9	6.86	0.64	141.6	558.1	99.13	34.41	39.34	64.72
G-4	-	-	-	-	-	-	-	98.29	35.8	-	62.49
G-5	1.23	N/N	6.2	6.64	1.13	179.2	530.9	101.42	38.88	41.37	62.54
G-7	1.41	N/N	5.9	6.30	10.03	168.1	284.2	99.57	38.61	41.49	60.96
MW 16-2	2.30	N/N	4.9	7.38	6.49	161.8	546.3	99.23	32.93	37.59	66.3
RW 16-1	1.50	N/N	5.4	10.27	13.06	138.0	656.8	99.45	33.32	39.65	66.13

\* G-1, G-3, G-4, G-5, G-7, MW 16-2, and RW16-1 surveyed on 10/17/19.

°C - degree Celsius

µs/cm°C - microsiemens per centimeter degrees Celsius

btoc - below top of casing

datum - locally established benchmark at 100 feet

elev. - elevation

GW - groundwater

mg/L - milligrams per liter

ORP - oxidation reduction potential

Y - Yes

N - No

N/A - Not applicable

Instruments/methods used for above measurements		Model
Static water level	Heron	H01L
Conductivity	YSI	Pro Plus
Dissolved Oxygen	YSI	Pro Solo
Temperature	YSI	Pro Solo
ORP	YSI	Pro Plus
pH	YSI	Pro Plus
Temp, pH, ORP, DO, Specific Conductance	YSI	Pro Plus

Well	Observations	Well Dia.(Inches)	Time	8260C	AK101	AK102	8270D-SIM	Sodium
G-1	Clear, grab sample	2	12:56	x	x	x		x
G-2		4	-					
G-3	Opaque, dark gray	4	13:50	x	x	x		x
G-4		2	-					
G-5	Transparent, light brown	2	12:18	x	x	x		x
G-7	Clear	2	11:37	x	x	x		x
RW16-1	Translucent, light brown, purged dry with a 15 minute	2	15:40	x	x	x		x
MW16-2	Transparent, light brown	2	14:35	x	x	x		x
Dup-01	Dup of MW16-2		14:35	x	x	x		x

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## **APPENDIX D**

### *Tables of Historical Monitoring Data*

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Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-1**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Apr-97	3.700	28.00	12.00	64.00	170.00	11.00	62.20
03-Sep-97	0.001	12.00	5.20	41.00	85.00	12.00	65.72
29-Dec-97	0.042	2.00	1.50	9.30	34.00	3.30	64.24
23-Apr-98	0.130	3.90	4.10	23.00	91.00	8.30	62.07
03-Aug-98	0.140	3.10	3.00	19.00	76.00	12.00	64.22
02-Nov-98	0.121	4.59	4.76	27.12	70.00	5.58	63.06
12-Feb-99	0.001	5.40	4.00	24.00	91.00	19.00	61.56
11-May-99	Ice	Ice	Ice	Ice	Ice	Ice	NM
30-Aug-99	0.001	3.10	5.60	36.00	190.00	10.00	63.46
29-Oct-99	0.001	0.026	0.035	0.21	0.89	0.45	66.59
08-Feb-00	0.001	3.30	4.40	26.00	10.00	NT	63.11
08-Jun-00	0.001	0.051	0.110	0.61	2.30	0.33	69.16
30-Aug-00	0.001	0.500	0.92	5.00	19.00	0.57	66.72
30-Nov-00	0.001	1.20	2.30	11.00	42.00	1.90	64.34
05-Feb-01	0.001	3.40	4.70	25.00	94.00	5.20	62.39
10-May-01	0.001	0.967	2.62	15.36	41.10	1.90	63.81
16-Aug-01	0.013	0.401	0.652	6.18	14.30	1.99	64.29
09-Nov-01	0.013	0.608	1.750	9.55	25.40	3.16	63.50
15-Feb-02	0.036	2.820	3.640	21.59	66.10	3.66	62.09
30-May-02	0.001	5.520	9.940	51.80	113.00	92.60	62.63
14-Aug-02	0.048	2.13	6.15	37.27	99.60	11.20	64.02
14-Nov-02	0.053	2.35	5.37	27.17	105	1.51	68.74
28-Jan-03	U (0.025)	0.462	1.04	7.55	24.8	3.83	65.52
17-Apr-03	0.217	1.15	4.55	26.9	117	4.7	63.23
17-Jul-03	U (0.05)	1.81	6	35.6	104	8.34	62.90
02-Oct-03	0.184	1.84	5.34	33.4	137	U (0.32)	62.80
20-Jan-04	U (0.2)	2.46	5.9	34.8	100	10.6	62.17
13-Apr-04	U (0.1)	1.49	6.37	37.5	109	6.97	63.76
20-Jul-04	U (0.25)	0.612	2.67	26.2	87.1	8.09	63.34
02-Sep-04	U (0.05)	0.38	2.6	18.4	48.5	4.94	NM
13-Oct-04	U (0.005)	0.615	0.232	1.87	5.98	1.9	65.10
28-Jan-05	U (0.0005)	0.121	0.0843	0.582	2.08	0.818	NM
11-Apr-05	U (0.0005)	0.069	0.0374	0.306	0.963	0.78	66.35
12-Aug-05	U (0.0005)	U (0.0005)	U (0.0005)	0.0031	U (0.05)	0.528	68.33
07-Oct-05	U (0.0005)	0.0103	0.0082	0.0713	0.24	U (0.397)	71.48
14-Feb-06	U (0.0005)	0.00831	0.0041	0.0482	0.141	0.676	64.20
18-Apr-06	0.0147	0.0874	0.962	6.64	24.8	8.37	63.30
06-Jul-06	U (0.0005)	0.00359	0.00289	0.0539	0.153	U (0.394)	63.46
26-Oct-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	76.53
02-Feb-07	U (0.0005)	0.21	0.257	1.95	7.79	1.04	NM
19-Apr-07	U (0.0005)	0.165	0.13	1.12	4.12	0.894	65.01
07-Aug-07	U (0.0005)	0.0536	0.0392	0.277	0.891	0.582	65.31
23-Oct-07	U (0.0005)	U (0.0005)	U (0.0005)	0.00566	U (0.05)	U (0.424)	64.23
22-Feb-08	U (0.0005)	0.0129	0.00712	0.068	0.229	0.479	62.02
15-Apr-08	U (0.0005)	0.0247	0.0137	0.116	0.45	0.667	62.01
27-Aug-08	U (0.0005)	0.00662	0.00397	0.0477	0.172	U (0.4)	63.33
22-Oct-08	U (0.0005)	0.032	0.0226	0.255	0.742	U (0.427)	64.14
05-Feb-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.463)	62.48
08-Apr-09	U (0.0005)	U (0.0005)	U (0.0005)	0.0021	U (0.05)	U (0.424)	62.85
09-Jul-09	U (0.0005)	0.00137	U (0.001)	0.0188	0.106	U (0.397)	63.28
04-Nov-09	U (0.0005)	0.00856	0.00624	0.0639	0.271	U (0.403)	63.73
27-Jan-10	U (0.0005)	0.00123	U (0.001)	0.0168	0.0757	0.844	61.69
27-May-10	U (0.0005)	0.0114	0.0117	0.0923	0.257	0.538	63.28
19-Aug-10	U (0.0005)	U (0.0005)	0.000537	0.0189	0.184	U (0.455)	63.88
26-Oct-10	U (0.0005)	0.00441	0.00443	0.0574	0.181	0.993	68.65
17-Feb-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.491	NM
09-Jun-11	U (0.0005)	0.000913	0.000945	0.0425	0.143	0.635	61.52

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-1**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
20-Sep-11	U (0.0005)	U (0.0005)	U (0.0005)	0.00236	U (0.05)	U (0.431)	63.43
21-Oct-11	U (0.0005)	0.0121	<b>0.0565</b>	<b>0.345</b>	0.851	U (0.417)	71.53
17-Feb-12	U (0.0005)	0.00128	0.00235	0.0410	0.0787	0.712	NM
17-May-12	U (0.0005)	0.00572	<b>0.0250</b>	<b>0.3390</b>	0.941	0.596	70.40
05-Sep-12	U (0.0005)	0.00468	0.0139	0.1450	0.404	U (0.424)	73.90
30-Oct-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.439)	76.36
30-Jan-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.461	65.97
10-May-13	U (0.0005)	0.000670	0.0140	0.166	0.248	U (0.424)	71.17
11-Oct-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.431)	74.89
11-Dec-13	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.403)	75.74
19-Feb-14	U (0.0005)	0.000667	U (0.0005)	0.00281	U (0.05)	U (0.403)	70.68
01-May-14	U (0.0005)	U (0.001)	0.0038	0.02800	0.110	U (0.41)	66.53
30-Oct-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	64.40
11-Feb-15	NT	NT	NT	NT	NT	NT	62.86
15-May-15	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (0.05)	0.34	61.97
02-Sep-15	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	0.150	U (0.40)	62.83
12-Nov-15	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.050)	0.63	64.35
28-Jan-16	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.050)	0.88	63.11
09-May-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.41)	66.37
24-Oct-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.41)	64.10
09-Dec-16	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (0.05)	U (0.11)	63.52
08-Feb-17	NT	NT	NT	NT	NT	NT	62.98
25-Apr-17	U (0.0002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	0.99	64.05
20-Oct-17	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (1.0)	1.4	64.50
13-Feb-18	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	0.88	62.88
17-Aug-18	<b>U (0.015)</b>	U (0.01)	U (0.015)	U (0.015)	U (0.25)	<b>1.6</b>	64.19
25-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	64.36
26-Feb-19	U (0.003)	U (0.002)	0.0066	U (0.003)	U (0.25)	0.51	62.74
24-Apr-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.25)	72.81
16-Jul-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	<b>1.6</b>	64.25
17-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	NM
12-Aug-20	U (0.001)	U (0.001)	U (0.001)	U (0.003)	U (0.100)	0.242	93.50*
02-Oct-20	U (0.001)	U (0.001)	0.000248 J	0.00262 J	0.0337 J	U (0.824)	97.31*
18-May-21	U (0.001)	U (0.001)	U (0.001)	U (0.002)	0.0152 B,J	0.405 J	97.24*
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-2**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Apr-97	U	0.001	U	0.0023	U	U	NM
03-Sep-97	U	0.001	U	0.0021	U	U	66.46
29-Dec-97	U	U	U	U	U	U	65.30
23-Apr-98	U	0.002	U	U	U	U	62.94
03-Aug-98	U	U	U	U	U	U	64.10
02-Nov-98	U	U	U	U	U	U	63.99
12-Feb-99	NT	NT	NT	NT	NT	NT	NM
11-May-99	U	U	U	U	U	U	61.57
30-Aug-99	U	U	U	U	U	0.100	64.82
29-Oct-99	U	U	U	U	U	U	66.80
08-Feb-00	NT	NT	NT	NT	NT	NT	62.77
08-Jun-00	U	U	U	0.00	U	U	69.20
30-Aug-00	NT	NT	NT	NT	NT	NT	NM
30-Nov-00	U	U	U	U	U	U	65.20
05-Feb-01	NT	NT	NT	NT	NT	NT	NM
10-May-01	U	U	0.005	0.021	0.114	U	64.07
09-Nov-01	U	U	U	U	U	U	63.28
15-Feb-02	NT	NT	NT	NT	NT	NT	NM
30-May-02	NT	NT	NT	NT	NT	NT	NM
14-Aug-02	NT	NT	NT	NT	NT	NT	65.91
14-Nov-02	NT	NT	NT	NT	NT	NT	NM
28-Jan-03	NT	NT	NT	NT	NT	NT	NM
17-Apr-03	NT	NT	NT	NT	NT	NT	64.19
17-Jul-03	NT	NT	NT	NT	NT	NT	NM
02-Oct-03	NT	NT	NT	NT	NT	NT	NM
20-Jan-04	NT	NT	NT	NT	NT	NT	NM
13-Apr-04	U (0.0005)	U (0.0005)	0.000557	0.00745	U (0.05)	U (0.5)	65.96
20-Jul-04	NT	NT	NT	NT	NT	NT	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	NM
11-Apr-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.421	65.96
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	NM
14-Feb-06	NT	NT	NT	NT	NT	NT	NM
18-Apr-06	NT	NT	NT	NT	NT	NT	64.58
06-Jul-06	NT	NT	NT	NT	NT	NT	NM
26-Oct-06	NT	NT	NT	NT	NT	NT	NM
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	NT	NT	NT	NT	NT	NT	62.74
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
05-Feb-09	NT	NT	NT	NT	NT	NT	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	NM
27-May-10	NT	NT	NT	NT	NT	NT	NM
19-Aug-10	NT	NT	NT	NT	NT	NT	NM
26-Oct-10	NT	NT	NT	NT	NT	NT	NM
17-Feb-11	NT	NT	NT	NT	NT	NT	NM
09-Jun-11	NT	NT	NT	NT	NT	NT	NM
20-Sep-11	NT	NT	NT	NT	NT	NT	NM
21-Oct-11	NT	NT	NT	NT	NT	NT	NM

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-2**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
17-Feb-12	NT	NT	NT	NT	NT	NT	NM
17-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	65.11
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	NM
30-Jan-13	NT	NT	NT	NT	NT	NT	NM
10-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.446)	67.42
11-Oct-13	NT	NT	NT	NT	NT	NT	74.73
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	NM
01-May-14	U (0.0005)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.40)	66.19
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	NT	NT	NT	NT	NT	NT	DRY
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	NM
28-Jan-16	NT	NT	NT	NT	NT	NT	NM
09-May-16	NT	NT	NT	NT	NT	NT	DRY
24-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM
08-Feb-17	NT	NT	NT	NT	NT	NT	NM
25-Apr-17	U (0.0002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	U (0.11)	64.07
20-Oct-17	NT	NT	NT	NT	NT	NT	65.23
13-Feb-18	NT	NT	NT	NT	NT	NT	NM
17-Aug-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	64.74
25-Oct-18	NT	NT	NT	NT	NT	NT	NM
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.27)	64.70
16-Jul-19	NT	NT	NT	NT	NT	NT	NM
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	U (0.001)	U (0.001)	U (0.001)	U (0.002)	U (0.100)	U (0.808)	67.83
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	NA



Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-3**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Apr-97	0.001	7.60	5.40	26.00	70.00	5.10	64.02
03-Sep-97	0.080	2.00	1.40	7.70	21.00	7.50	64.72
29-Dec-97	0.057	0.43	1.50	4.70	19.00	3.50	63.33
23-Apr-98	0.001	0.49	3.10	10.00	40.00	6.90	61.11
03-Aug-98	0.140	0.45	3.30	10.00	39.00	2.00	62.23
02-Nov-98	0.001	0.58	3.00	10.27	30.00	2.43	62.07
12-Feb-99	0.001	0.52	3.90	12.00	48.00	8.00	60.58
11-May-99	0.051	0.12	1.02	4.16	14.00	17.60	60.43
30-Aug-99	0.001	0.12	1.60	3.90	19.00	4.60	62.48
29-Oct-99	0.0018	0.0016	0.017	0.073	0.32	0.92	66.44
08-Feb-00	0.007	0.0380	0.470	0.890	4.00	0.00	62.56
08-Jun-00	0.001	U	0.003	0.01	0.00	1.10	69.16
30-Aug-00	0.001	0.0018	0.004	0.03	0.12	0.51	66.67
30-Nov-00	0.006	0.0320	0.320	0.68	2.90	5.50	63.83
05-Feb-01	0.006	0.1400	0.460	0.90	4.30	5.90	61.72
10-May-01	0.001	U	0.003	0.009	0.00	12.80	62.84
16-Aug-01	0.005	0.0613	0.390	0.856	2.76	8.75	63.44
09-Nov-01	0.034	0.0828	0.019	0.103	0.57	1.57	62.59
15-Feb-02	0.008	0.1190	0.049	0.156	0.87	70.70	61.16
30-May-02	0.021	0.0809	0.200	0.605	2.25	34.20	62.13
14-Aug-02	0.029	0.1470	0.488	1.490	5.44	5.68	63.37
14-Nov-02	0.0658	0.186	0.804	1.9704	8.97	4.08	68.85
28-Jan-03	0.0571	0.0914	0.319	0.644	2.93	7.89	64.85
17-Apr-03	0.00288	0.0274	0.0282	0.082	0.585	4.58	62.58
17-Jul-03	U (0.0005)	0.0165	0.0107	0.0327	0.233	7.48	62.29
02-Oct-03	U (0.0005)	0.00224	0.000626	0.00232	U (0.08)	1.14	62.25
20-Jan-04	U (0.0005)	0.0439	0.00399	0.0127	0.144	1.83	61.39
13-Apr-04	U (0.005)	0.0261	0.0472	0.148	0.855	2.89	62.78
20-Jul-04	U (0.0005)	0.0305	0.0028	0.00853	0.164	19.4	63.86
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
13-Oct-04	U (0.0005)	0.000537	U (0.0005)	U (0.001)	U (0.08)	2.11	64.04
28-Jan-05	0.000857	0.0293	0.00078	0.0038	0.0973	3.65	64.60
11-Apr-05	0.00311	0.0113	0.00232	0.0253	0.127	2.58	63.60
12-Aug-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	1.14	68.30
07-Oct-05	U (0.0005)	0.00234	U (0.0005)	U (0.0015)	U (0.05)	2.85	71.45
14-Feb-06	0.000874	0.076	0.00129	0.0072	0.215	3	63.13
18-Apr-06	U (0.0005)	0.0614	0.000884	0.00356	0.181	7.64	62.66
06-Jul-06	U (0.0005)	0.00252	U (0.0005)	U (0.0015)	U (0.05)	3.17	62.79
26-Oct-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	1.06	76.42
02-Feb-07	0.00528	0.0513	0.0017	0.0154	0.236	2.27	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.841	62.24
23-Oct-07	0.00502	0.0358	0.02	0.0319	0.322	1.41	62.23
21-Feb-08	0.00517	0.0307	0.067	0.144	0.771	0.93	60.73
15-Apr-08	0.00562	0.04	0.135	0.211	1.44	0.604	60.72
27-Aug-08	0.0138	0.436	0.842	2.88	7.26	0.978	62.69
22-Oct-08	0.0124	0.514	0.96	3.57	9.55	0.83	62.80
05-Feb-09	U (0.01)	0.234	1.17	4.73	15.7	0.909	61.40
19-Feb-09	0.0071	0.0493	0.0834	0.241	1.04	9.47	NM
08-Apr-09	U (0.005)	0.0702	0.378	1.43	4.2	1.51	60.84
09-Jul-09	U (0.0005)	0.0415	1.12	4.32	3.01	1.81	61.93
04-Nov-09	U (0.0005)	0.101	0.579	2.55	12.7	U (0.400)	61.69
27-Jan-10	U (0.0005)	0.0157	0.337	2.01	6.47	1.12	60.29
27-May-10	U (0.0005)	0.000748	0.0379	0.137	0.936	1.01	61.19
19-Aug-10	U (0.0005)	0.000756	0.0336	0.120	0.933	U (0.403)	62.19
26-Oct-10	U (0.0025)	U (0.0025)	0.153	0.643	4.62	U (0.397)	61.98
17-Feb-11	U (0.0005)	0.00112	0.0647	0.222	2.11	4.10	60.36

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-3**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Jun-11	0.000536	0.00188	<b>0.0666</b>	<b>0.232</b>	<b>2.26</b>	U (0.446)	60.45
20-Sep-11	U (0.0005)	0.000718	<b>0.0235</b>	0.0794	1.69	U (0.400)	62.17
21-Oct-11	0.00107	0.00126	<b>0.0325</b>	0.105	<b>2.51</b>	U (0.417)	61.76
17-Feb-12	0.000809	0.000792	<b>0.0536</b>	0.131	<b>2.62</b>	1.15	60.66
17-May-12	0.00117	0.00164	<b>0.0899</b>	<b>0.303</b>	<b>5.91</b>	0.560	62.88
05-Sep-12	U (0.0005)	U (0.0005)	<b>0.166</b>	0.049	0.710	U (0.424)	NM
30-Oct-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.431)	76.33
30-Jan-13	U (0.0005)	0.00364	<b>0.0182</b>	0.056	0.818	0.670	65.89
10-May-13	0.00153	0.00151	<b>0.0554</b>	0.167	1.35	U (0.439)	65.55
11-Oct-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	74.62
11-Dec-13	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.417)	75.70
19-Feb-14	U (0.0005)	U (0.0005)	0.00066	0.00177	U (0.05)	0.928	70.63
01-May-14	U (0.0005)	0.001	0.0066	0.017	0.300	<b>4.80</b>	65.77
30-Oct-14	U (0.0005)	U (0.0005)	0.0097	0.023	0.460	1.00	63.61
11-Feb-15	0.002	0.0011	<b>0.0870</b>	<b>0.240</b>	<b>4.80</b>	<b>12.00</b>	61.31
15-May-15	U (0.002)	U (0.002)	0.0078	0.015	<b>2.6</b>	1.3	60.81
02-Sep-15	U (0.0002)	U (0.001)	0.0079	0.0064	1.1	U (0.40)	61.30
12-Nov-15	U (0.0020)	U (0.0020)	<b>0.036</b>	0.069	<b>3.2</b>	0.26	63.19
28-Jan-16	U (0.0020)	U (0.0020)	<b>0.027</b>	0.052	<b>3.2</b>	0.76	61.95
09-May-16	0.0002	U (0.001)	0.0086	0.012	1.6	0.58	62.85
24-Oct-16	0.0002	U (0.001)	0.0017	0.0036	<b>4.4</b>	0.37	62.53
09-Dec-16	U (0.002)	U (0.002)	0.002	0.0038	<b>4.2</b>	0.48	61.97
08-Feb-17	NT	NT	NT	NT	NT	NT	61.12
25-Apr-17	U (0.0002)	U (0.002)	0.0089	<b>0.016</b>	<b>2.3</b>	<b>4.7</b>	62.36
20-Oct-17	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (1.0)	<b>3</b>	63.07
13-Feb-18	U (0.002)	0.0054	U (0.003)	0.0047	U (1.0)	<b>6.7</b>	61.76
17-Aug-18	U (0.003)	0.00091 J	0.0047	0.00938 J	0.99	<b>3.2</b>	62.78
25-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	0.37	<b>2.3</b>	63.06
26-Feb-19	U (0.003)	U (0.002)	0.006	0.013	1.7	<b>8.5</b>	61.46
24-Apr-19	U (0.003)	U (0.002)	0.0034	0.0068	1.6	<b>7.7</b>	62.48
16-Jul-19	U (0.003)	U (0.002)	0.0033	0.006	1.3	<b>4.6</b>	63.05
17-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	0.58	<b>3.6 H</b>	65.53
12-Aug-20	U (0.001)	U (0.001)	0.000754	0.00159	0.173	0.339	67.25
02-Oct-20	U (0.001)	U (0.001)	0.000143	U (0.002)	0.12	1.45	66.93
03-Mar-21	U (0.001)	U (0.001)	0.00091 J	0.00086 J	1.01	1.47	62.99
18-May-21	U (0.001)	U (0.001)	U (0.001)	U (0.002)	1.36	<b>8.48</b>	64.72
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	NA

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-4**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Apr-97	U	0.001	U	0.0048	U	NT	NM
03-Sep-97	U	U	U	U	U	0.32	63.34
29-Dec-97	U	U	U	U	U	U	62.44
23-Apr-98	U	U	U	U	U	U	58.99
03-Aug-98	U	U	U	U	U	U	61.02
02-Nov-98	U	0.0012	U	0.0011	U	U	60.65
12-Feb-99	U	U	U	U	U	0.36	57.89
10-May-99	U	U	0.0065	0.0279	0.091	<b>1.98</b>	57.53
30-Aug-99	U	U	U	U	U	U	60.64
29-Oct-99	U	U	U	U	U	U	66.09
08-Feb-00	NT	NT	NT	NT	NT	NT	NM
08-Jun-00	U	U	U	U	U	0.300	68.92
30-Aug-00	NT	NT	NT	NT	NT	NT	NM
30-Nov-00	U	U	U	U	U	U	63.27
05-Feb-01	NT	NT	NT	NT	NT	NT	60.65
10-May-01	U	U	U	0.002	U	U	61.25
09-Nov-01	U	U	U	U	U	U	61.22
15-Feb-02	NT	NT	NT	NT	NT	NT	58.19
30-May-02	U	0.003	U	U	U	U	59.63
14-Aug-02	NT	NT	NT	NT	NT	NT	61.84
14-Nov-02	NT	NT	NT	NT	NT	NT	NM
28-Jan-03	NT	NT	NT	NT	NT	NT	64.13
17-Apr-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.25)	61.10
17-Jul-03	NT	NT	NT	NT	NT	NT	60.82
02-Oct-03	NT	NT	NT	NT	NT	NT	60.39
20-Jan-04	NT	NT	NT	NT	NT	NT	58.80
13-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	59.58
20-Jul-04	NT	NT	NT	NT	NT	NT	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	63.32
11-Apr-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	<b>1.67</b>	62.06
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	71.21
14-Feb-06	NT	NT	NT	NT	NT	NT	62.63
18-Apr-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.407)	61.01
06-Jul-06	NT	NT	NT	NT	NT	NT	61.46
26-Oct-06	NT	NT	NT	NT	NT	NT	76.18
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.431)	62.50
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.436	58.07
27-Aug-08	NT	NT	NT	NT	NT	NT	61.28
22-Oct-08	NT	NT	NT	NT	NT	NT	61.54
05-Feb-09	NT	NT	NT	NT	NT	NT	59.07
19-Feb-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.463)	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	57.24
09-Jul-09	NT	NT	NT	NT	NT	NT	59.94
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	56.82
27-May-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.431)	57.47
19-Aug-10	NT	NT	NT	NT	NT	NT	59.04
26-Oct-10	NT	NT	NT	NT	NT	NT	59.95
17-Feb-11	NT	NT	NT	NT	NT	NT	56.83
09-Jun-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.424)	57.29
20-Sep-11	NT	NT	NT	NT	NT	NT	59.96

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-4**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
21-Oct-11	NT	NT	NT	NT	NT	NT	59.90
17-Feb-12	NT	NT	NT	NT	NT	NT	57.21
17-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.819	60.90
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	76.02
30-Jan-13	NT	NT	NT	NT	NT	NT	65.81
10-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.463)	64.66
11-Oct-13	NT	NT	NT	NT	NT	NT	74.35
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	70.46
01-May-14	U (0.0005)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.42)	65.39
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (0.05)	U (0.23)	57.78
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	61.97
28-Jan-16	NT	NT	NT	NT	NT	NT	60.14
09-May-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.42)	60.67
24-Oct-16	NT	NT	NT	NT	NT	NT	60.7
09-Dec-16	NT	NT	NT	NT	NT	NT	59.94
08-Feb-17	NT	NT	NT	NT	NT	NT	57.36
25-Apr-17	U (0.0002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	U (0.11)	58.77
20-Oct-17	NT	NT	NT	NT	NT	NT	61.02
13-Feb-18	NT	NT	NT	NT	NT	NT	59.22
17-Aug-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	60.90
25-Oct-18	NT	NT	NT	NT	NT	NT	61.56
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.28)	60.29
16-Jul-19	NT	NT	NT	NT	NT	NT	61.15
17-Oct-19	NT	NT	NT	NT	NT	NT	63.33
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	U (0.001)	U (0.001)	U (0.001)	U (0.002)	U (0.100)	0.281 J	66.26
18-May-21	NC	NC	NC	NC	NC	NC	62.49
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	NA

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-5**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Apr-97	0.032	0.56	0.91	5.20	17.00		58.34
03-Sep-97	0.001	U	1.10	5.40	25.00	4.80	63.30
29-Dec-97	0.065	0.15	1.00	4.70	19.00	4.00	62.25
23-Apr-98	0.048	0.068	0.38	1.70	11.00	2.70	59.07
03-Aug-98	0.001	U	U	0.0019	0.00	0.27	60.74
02-Nov-98	0.026	0.01	0.12	0.27	3.70	1.82	60.43
12-Feb-99	NT	NT	NT	NT	NT	NT	NM
10-May-99	NT	NT	NT	NT	NT	NT	NM
31-Aug-99	0.011	0.029	0.340	0.900	4.60	0.950	60.55
29-Oct-99	0.024	0.006	0.066	0.110	2.70	0.40	66.08
08-Feb-00	0.008	0.006	0.053	0.100	4.20	NT	61.10
08-Jun-00	0.001	U	0.023	0.04	0.61	0.00	69.02
30-Aug-00	0.001	U	0.004	0.008	0.220	0.001	66.58
30-Nov-00	0.012	0.006	0.079	0.140	3.900	0.490	63.26
05-Feb-01	0.015	0.008	0.016	0.026	2.100	0.320	60.47
10-May-01	0.007	U	0.061	0.100	1.620	0.001	61.12
16-Aug-01	0.031	0.011	0.042	0.065	2.740	U	62.11
09-Nov-01	0.004	U	U	0.002	0.258	U	61.05
15-Feb-02	NT	NT	NT	NT	NT	NT	NM
30-May-02	NT	NT	NT	NT	NT	NT	NM
14-Aug-02	0.013	0.003	0.145	0.182	2.530	0.552	61.71
14-Nov-02	0.00257	U (0.002)	U (0.002)	U (0.002)	0.137	U (0.5)	68.57
28-Jan-03	0.064	U (0.02)	0.0733	0.0667	2.4	1.2	64.08
17-Apr-03	0.0181	0.002	0.0834	0.186	3.14	0.418	61.01
17-Jul-03	U (0.005)	U (0.005)	0.0666	0.184	2.72	U (0.5)	60.80
02-Oct-03	0.0125	0.00577	0.127	0.217	4.33	U (0.32)	60.51
20-Jan-04	NT	NT	NT	NT	NT	NT	NM
13-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	0.0539	U (0.5)	59.99
20-Jul-04	0.00351	U (0.0005)	0.0561	0.0239	1.7	0.484	60.95
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
13-Oct-04	0.009	0.00155	0.0893	0.113	2.71	0.443	57.72
28-Jan-05	0.0011	0.00198	0.0183	0.02	1.35	0.45	63.15
11-Apr-05	U (0.0005)	0.000845	0.0138	0.0117	1.06	U (0.391)	61.89
12-Aug-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	68.20
07-Oct-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.407)	71.31
14-Feb-06	0.00186	0.00136	0.0163	0.0066	1.34	0.475	62.43
18-Apr-06	0.0018	0.000663	0.153	0.24	2.04	0.693	62.00
06-Jul-06	0.00141	0.00158	0.0932	0.103	1.14	U (0.41)	61.34
26-Oct-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.41)	76.31
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	U (0.0005)	U (0.0005)	0.0163	0.0227	0.774	U (0.435)	62.68
07-Aug-07	0.00147	U (0.0005)	0.00611	0.007	0.529	U (0.407)	60.94
23-Oct-07	U (0.0005)	U (0.0005)	0.00534	0.00603	0.4	U (0.446)	60.75
21-Feb-08	0.00231	0.000739	0.0592	0.0523	1.97	U (0.417)	58.73
15-Apr-08	NT	NT	NT	NT	NT	NT	58.39
27-Aug-08	U (0.0005)	U (0.0005)	0.0203	0.0243	0.506	U (0.4)	61.12
22-Oct-08	U (0.0005)	U (0.0005)	0.00629	0.00512	0.35	U (0.420)	61.35
05-Feb-09	0.00093	0.00211	0.0898	0.101	2.02	0.59	59.36
19-Feb-09	0.00249	0.00283	0.129	0.262	1.96	0.689	NM
08-Apr-09	0.0058	0.169	0.26	0.634	3.84	U (0.435)	57.51
09-Jul-09	0.00267	0.00452	0.184	0.284	2.51	U (0.410)	60.05
04-Nov-09	0.00365	0.00739	0.292	0.645	4.13	U (0.397)	59.31
27-Jan-10	0.00385	0.0313	0.499	1.51	7.17	U (0.427)	57.11
27-May-10	0.0022	0.0218	0.406	1.22	5.19	0.668	57.97
19-Aug-10	0.00105	0.00307	0.233	0.977	3.27	0.415	59.56
26-Oct-10	U (0.0022)	U (0.0005)	0.0449	0.0723	0.741	U (0.403)	60.06
17-Feb-11	0.00291	0.0034	0.108	0.472	3.11	U (0.410)	57.11

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-5**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
09-Jun-11	0.00199	0.00405	<b>0.173</b>	<b>0.856</b>	<b>5.08</b>	0.436	57.63
20-Sep-11	0.00101	0.00133	<b>0.0362</b>	0.138	0.975	U (0.403)	60.13
21-Oct-11	U (0.0005)	U (0.0005)	0.0121	0.0303	0.365	U (0.439)	60.05
17-Feb-12	0.00403	0.00497	<b>0.0807</b>	<b>0.476</b>	<b>2.80</b>	0.726	57.53
17-May-12	0.000704	0.000734	0.0125	0.0378	0.683	0.541	60.79
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	76.18
30-Jan-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	65.81
10-May-13	0.000520	0.000627	U (0.0005)	0.00194	0.221	U (0.400)	64.83
11-Oct-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.439)	74.49
11-Dec-13	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.403)	75.58
19-Feb-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.400)	70.56
01-May-14	U (0.005)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.41)	65.66
30-Oct-14	0.000860	U (0.0005)	U (0.0005)	U (0.0015)	0.190	U (0.42)	62.96
11-Feb-15	U (0.0005)	U (0.0005)	0.0031	0.0031	0.280	U (0.42)	59.60
15-May-15	NT	NT	NT	NT	NT	NT	DRY
02-Sep-15	NT	NT	NT	NT	NT	NT	DRY
12-Nov-15	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	0.32	U (0.21)	61.78
28-Jan-16	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.050)	U (0.11)	60.14
9-May-16	NT	NT	NT	NT	NT	NT	DRY
24-Oct-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.41)	60.57
9-Dec-16	U (0.002)	U (0.001)	0.0063	0.0034	0.17	U (0.12)	59.98
8-Feb-17	NT	NT	NT	NT	NT	NT	DRY
24-Apr-17	U (0.0002)	U (0.001)	0.085	<b>0.44</b>	1.4	0.22	59.64
20-Oct-17	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (1.0)	U (0.110)	60.86
13-Feb-18	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	U (0.13)	59.52
17-Aug-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	60.76
25-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	61.38
26-Feb-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	0.12	59.39
24-Apr-19	U (0.003)	U (0.002)	0.0086	0.0068	U (0.25)	U (0.27)	60.41
16-Jul-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	61.58
17-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	63.67
12-Aug-20	U (0.001)	U (0.001)	U (0.001)	U (0.003)	U (0.100)	U (0.864)	66.9
02-Oct-20	0.000236 J	U (0.001)	U (0.001)	U (0.002)	0.0189 J	0.406 J	66.27
18-May-21	U (0.001)	U (0.001)	0.0017	U (0.002)	0.0693 B,J	U (0.800)	62.54
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-6**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
03-Sep-97	U	0.013	0.006	0.042	0.088	13	NM
29-Dec-97	0.039	0.0019	0.0014	0.0087	0.031	3.600	NM
03-Aug-98	U	U	U	U	U	U	60.89
02-Nov-98	0.001	0.0085	0.014	0.070	0.190	U	60.97
12-Feb-99	U	U	U	U	U	U	61.46
11-May-99	U	U	U	0.0026	U	U	58.37
30-Aug-99	U	U	U	U	U	U	61.27
29-Oct-99	U	U	U	U	U	U	66.60
08-Feb-00	NT	NT	NT	NT	NT	NT	61.54
08-Jun-00	U	U	U	U	U	U	69.19
30-Aug-00	NT	NT	NT	NT	NT	NT	66.68
30-Nov-00	U	U	U	U	U	U	63.30
05-Feb-01	NT	NT	NT	NT	NT	NT	NM
10-May-01	U	U	U	U	U	U	61.63
09-Nov-01	U	U	U	U	U	U	61.39
15-Feb-02	NT	NT	NT	NT	NT	NT	NM
30-May-02	U	U	U	U	U	U	60.60
14-Aug-02	NT	NT	NT	NT	NT	NT	NM
14-Nov-02	NT	NT	NT	NT	NT	NT	NM
28-Jan-03	NT	NT	NT	NT	NT	NT	NM
17-Apr-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.25)	61.44
17-Jul-03	NT	NT	NT	NT	NT	NT	61.21
02-Oct-03	NT	NT	NT	NT	NT	NT	NM
20-Jan-04	NT	NT	NT	NT	NT	NT	NM
13-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	61.21
20-Jul-04	NT	NT	NT	NT	NT	NT	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	NM
11-Apr-05	NT	NT	NT	NT	NT	NT	NM
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	NM
14-Feb-06	NT	NT	NT	NT	NT	NT	NM
18-Apr-06	NT	NT	NT	NT	NT	NT	NM
06-Jul-06	NT	NT	NT	NT	NT	NT	NM
26-Oct-06	NT	NT	NT	NT	NT	NT	NM
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	NT	NT	NT	NT	NT	NT	NM
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
05-Feb-09	NT	NT	NT	NT	NT	NT	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	NM
27-May-10	NT	NT	NT	NT	NT	NT	NM
19-Aug-10	NT	NT	NT	NT	NT	NT	NM
26-Oct-10	NT	NT	NT	NT	NT	NT	NM
17-Feb-11	NT	NT	NT	NT	NT	NT	NM
09-Jun-11	NT	NT	NT	NT	NT	NT	NM
20-Sep-11	NT	NT	NT	NT	NT	NT	NM
21-Oct-11	NT	NT	NT	NT	NT	NT	NM
17-Feb-12	NT	NT	NT	NT	NT	NT	NM
17-May-12	NT	NT	NT	NT	NT	NT	NM

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-6**

<b>Date</b>	<b>Benzene (mg/L)</b>	<b>Toluene (mg/L)</b>	<b>Ethylbenzene (mg/L)</b>	<b>Xylenes (mg/L)</b>	<b>GRO (mg/L)</b>	<b>DRO (mg/L)</b>	<b>GW Elev (feet)</b>
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	NM
30-Jan-13	NT	NT	NT	NT	NT	NT	NM
10-May-13	NT	NT	NT	NT	NT	NT	NM
11-Oct-13	NT	NT	NT	NT	NT	NT	NM
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	NM
01-May-14	NT	NT	NT	NT	NT	NT	NM
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	NT	NT	NT	NT	NT	NT	NM
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	NM
28-Jan-16	NT	NT	NT	NT	NT	NT	NM
09-May-16	NT	NT	NT	NT	NT	NT	NM
24-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM
08-Feb-17	NT	NT	NT	NT	NT	NT	NM
25-Apr-17	NT	NT	NT	NT	NT	NT	NM
20-Oct-17	NT	NT	NT	NT	NT	NT	NM
13-Feb-18	NT	NT	NT	NT	NT	NT	NM
17-Aug-18	NT	NT	NT	NT	NT	NT	NM
25-Oct-18	NT	NT	NT	NT	NT	NT	NM
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	NT	NT	NT	NT	NT	NT	NM
16-Jul-19	NT	NT	NT	NT	NT	NT	NM
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	NT	NT	NT	NT	NT	NT	NM
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	NA



Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-7**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
03-Aug-98	U	U	U	U	U	U	59.62
02-Nov-98	U	0.005	0.012	0.058	0.16	U	59.19
12-Feb-99	U	U	U	U	U	0.79	54.81
10-May-99	U	U	U	U	U	0.45	54.19
30-Aug-99	U	U	U	U	U	U	58.32
29-Oct-99	U	U	U	U	U	U	66.07
08-Feb-00	NT	NT	NT	NT	NT	NT	60.91
08-Jun-00	U	U	U	U	U	U	68.93
30-Aug-00	NT	NT	NT	NT	NT	NT	NM
30-Nov-00	U	U	U	U	U	U	63.27
05-Feb-01	NT	NT	NT	NT	NT	NT	NM
10-May-01	U	U	U	U	U	U	59.55
09-Nov-01	U	U	U	U	U	U	59.79
15-Feb-02	NT	NT	NT	NT	NT	NT	NM
30-May-02	U	U	U	U	U	2.47	56.63
14-Aug-02	NT	NT	NT	NT	NT	NT	59.20
14-Nov-02	NT	NT	NT	NT	NT	NT	NM
28-Jan-03	NT	NT	NT	NT	NT	NT	NM
17-Apr-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.25)	59.37
17-Jul-03	NT	NT	NT	NT	NT	NT	NM
02-Oct-03	NT	NT	NT	NT	NT	NT	NM
20-Jan-04	NT	NT	NT	NT	NT	NT	NM
13-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	55.28
20-Jul-04	NT	NT	NT	NT	NT	NT	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	NM
11-Apr-05	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.435)	61.36
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	NM
14-Feb-06	NT	NT	NT	NT	NT	NT	NM
18-Apr-06	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.397)	58.98
06-Jul-06	NT	NT	NT	NT	NT	NT	NM
26-Oct-06	NT	NT	NT	NT	NT	NT	NM
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.42)	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.673	55.30
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
19-Feb-09	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.455)	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.397)	53.89
27-May-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.439)	54.20
19-Aug-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	55.54
26-Oct-10	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.407)	57.61
17-Feb-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	53.66
09-Jun-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.439)	54.23
20-Sep-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.391)	57.46
21-Oct-11	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.413)	57.47
17-Feb-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.584	54.08
17-May-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.628	59.53
18-Jul-12	U (0.0005)	U (0.0010)	U (0.0010)	U (0.0030)	U (0.05)	U (0.403)	NM
05-Sep-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.400)	62.00

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-7**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
30-Oct-12	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.397)	75.98
30-Jan-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	0.531	65.85
15-Feb-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	64.02
10-May-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.417)	64.65
11-Oct-13	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.410)	74.31
11-Dec-13	U (0.0005)	U (0.001)	U (0.001)	U (0.003)	U (0.05)	U (0.410)	75.38
19-Feb-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.407)	70.46
01-May-14	U (0.0005)	U (0.001)	U (0.001)	U (0.001)	U (0.05)	U (0.39)	65.63
30-Oct-14	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.39)	62.96
11-Feb-15	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.42)	57.40
15-May-15	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.42)	54.98
02-Sep-15	U (0.0020)	U (0.001)	U (0.001)	U (0.001)	0.16	U (0.42)	55.74
12-Nov-15	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.050)	U (0.20)	61.73
28-Jan-16	U (0.0020)	U (0.0020)	U (0.0030)	U (0.0020)	U (0.050)	0.23	58.37
09-May-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.41)	56.26
24-Oct-16	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (0.1)	U (0.41)	59.67
09-Dec-16	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (0.05)	U (0.11)	58.06
08-Feb-17	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (0.05)	U (0.11)	54.46
25-Apr-17	U (0.0002)	U (0.001)	U (0.001)	U (0.003)	U (1.0)	U (0.11)	55.08
20-Oct-17	U (0.002)	U (0.002)	U (0.003)	U (0.003)	U (1.0)	U (0.110)	59.98
13-Feb-18	U (0.002)	U (0.002)	U (0.003)	U (0.002)	U (1.0)	U (0.12)	56.66
17-Aug-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	60.08
25-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	61.28
26-Feb-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.13)	57.07
24-Apr-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.26)	58.43
16-Jul-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	61.50
17-Oct-19	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	63.57
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	U (0.001)	U (0.001)	U (0.001)	U (0.002)	U (0.100)	U (0.888)	67.25
18-May-21	U (0.001)	U (0.001)	U (0.001)	U (0.002)	0.0320 B,J	U (0.800)	60.96
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-8**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
03-Aug-98	U	U	U	U	U	U	59.56
02-Nov-98	U	0.003	0.0074	0.0037	0.094	U	59.18
12-Feb-99	U	U	U	U	U	U	54.79
10-May-99	U	U	U	U	U	U	54.13
30-Aug-99	U	U	U	U	U	U	58.25
29-Oct-99	U	U	U	U	U	U	66.00
08-Feb-00	NT	NT	NT	NT	NT	NT	60.88
08-Jun-00	U	U	U	U	U	U	68.89
30-Aug-00	NT	NT	NT	NT	NT	NT	NM
30-Nov-00	U	U	U	U	U	0.130	63.25
05-Feb-01	NT	NT	NT	NT	NT	NT	NM
10-May-01	U	U	U	U	U	U	59.49
09-Nov-01	U	U	U	U	U	U	59.78
15-Feb-02	NT	NT	NT	NT	NT	NT	NM
30-May-02	U	U	U	U	U	U	56.58
14-Aug-02	NT	NT	NT	NT	NT	NT	59.15
14-Nov-02	NT	NT	NT	NT	NT	NT	NM
28-Jan-03	NT	NT	NT	NT	NT	NT	NM
17-Apr-03	U (0.0005)	U (0.0005)	U (0.0005)	U (0.001)	U (0.08)	U (0.25)	59.34
17-Jul-03	NT	NT	NT	NT	NT	NT	NM
02-Oct-03	NT	NT	NT	NT	NT	NT	NM
20-Jan-04	NT	NT	NT	NT	NT	NT	NM
13-Apr-04	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.5)	55.21
20-Jul-04	NT	NT	NT	NT	NT	NT	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	NM
11-Apr-05	NT	NT	NT	NT	NT	NT	NM
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	NM
14-Feb-06	NT	NT	NT	NT	NT	NT	NM
18-Apr-06	NT	NT	NT	NT	NT	NT	NM
06-Jul-06	NT	NT	NT	NT	NT	NT	NM
26-Oct-06	NT	NT	NT	NT	NT	NT	NM
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	NT	NT	NT	NT	NT	NT	NM
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
05-Feb-09	NT	NT	NT	NT	NT	NT	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	NM
27-May-10	NT	NT	NT	NT	NT	NT	NM
19-Aug-10	NT	NT	NT	NT	NT	NT	NM
26-Oct-10	NT	NT	NT	NT	NT	NT	NM
17-Feb-11	NT	NT	NT	NT	NT	NT	NM
09-Jun-11	NT	NT	NT	NT	NT	NT	NM
20-Sep-11	NT	NT	NT	NT	NT	NT	NM
21-Oct-11	NT	NT	NT	NT	NT	NT	NM
17-Feb-12	NT	NT	NT	NT	NT	NT	NM
17-May-12	NT	NT	NT	NT	NT	NT	NM
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	NM

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well G-8**

<b>Date</b>	<b>Benzene (mg/L)</b>	<b>Toluene (mg/L)</b>	<b>Ethylbenzene (mg/L)</b>	<b>Xylenes (mg/L)</b>	<b>GRO (mg/L)</b>	<b>DRO (mg/L)</b>	<b>GW Elev (feet)</b>
30-Jan-13	NT	NT	NT	NT	NT	NT	NM
10-May-13	NT	NT	NT	NT	NT	NT	NM
11-Oct-13	NT	NT	NT	NT	NT	NT	NM
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	NM
01-May-14	NT	NT	NT	NT	NT	NT	NM
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	NT	NT	NT	NT	NT	NT	NM
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	NM
28-Jan-16	NT	NT	NT	NT	NT	NT	NM
09-May-16	NT	NT	NT	NT	NT	NT	NM
24-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM
08-Feb-17	NT	NT	NT	NT	NT	NT	NM
25-Apr-17	NT	NT	NT	NT	NT	NT	NM
20-Oct-17	NT	NT	NT	NT	NT	NT	NM
13-Feb-18	NT	NT	NT	NT	NT	NT	NM
17-Aug-18	NT	NT	NT	NT	NT	NT	NM
25-Oct-18	NT	NT	NT	NT	NT	NT	NM
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	NT	NT	NT	NT	NT	NT	NM
16-Jul-19	NT	NT	NT	NT	NT	NT	NM
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	NT	NT	NT	NT	NT	NT	NM
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well VSC**

<b>Date</b>	<b>Benzene (mg/L)</b>	<b>Toluene (mg/L)</b>	<b>Ethylbenzene (mg/L)</b>	<b>Xylenes (mg/L)</b>	<b>GRO (mg/L)</b>	<b>DRO (mg/L)</b>	<b>GW Elev (feet)</b>
28-Jan-03	U (0.05)	5.9	2.52	13.97	53.7	3.5	65.52
17-Apr-03	0.141	5.73	2.69	16	75.3	2.54	NM
17-Jul-03	U (0.05)	18.5	7.64	43.3	161	4.73	NM
02-Oct-03	NT	NT	NT	NT	NT	NT	NM
20-Jan-04	U (0.2)	4.89	3.03	18.7	52.4	4.06	NM
13-Apr-04	U (0.1)	7.93	4.78	23.8	90	1.34	NM
20-Jul-04	U (0.25)	5.78	2.5	23.4	88.8	4.96	NM
02-Sep-04	U (0.5)	11.7	10.4	75.1	229	18.9	NM
02-Sep-04	NT	NT	NT	NT	NT	NT	NM
28-Jan-05	NT	NT	NT	NT	NT	NT	NM
11-Apr-05	NT	NT	NT	NT	NT	NT	NM
12-Aug-05	NT	NT	NT	NT	NT	NT	NM
07-Oct-05	NT	NT	NT	NT	NT	NT	NM
14-Feb-06	NT	NT	NT	NT	NT	NT	NM
18-Apr-06	NT	NT	NT	NT	NT	NT	NM
06-Jul-06	NT	NT	NT	NT	NT	NT	NM
26-Oct-06	NT	NT	NT	NT	NT	NT	NM
02-Feb-07	NT	NT	NT	NT	NT	NT	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	NT	NT	NT	NT	NT	NT	NM
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
05-Feb-09	NT	NT	NT	NT	NT	NT	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	NM
27-May-10	NT	NT	NT	NT	NT	NT	NM
19-Aug-10	NT	NT	NT	NT	NT	NT	NM
26-Oct-10	NT	NT	NT	NT	NT	NT	NM
17-Feb-11	NT	NT	NT	NT	NT	NT	NM
09-Jun-11	NT	NT	NT	NT	NT	NT	NM
20-Sep-11	NT	NT	NT	NT	NT	NT	NM
21-Oct-11	NT	NT	NT	NT	NT	NT	NM
17-Feb-12	NT	NT	NT	NT	NT	NT	NM
17-May-12	NT	NT	NT	NT	NT	NT	NM
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	NM
30-Jan-13	NT	NT	NT	NT	NT	NT	NM
10-May-13	NT	NT	NT	NT	NT	NT	NM
11-Oct-13	NT	NT	NT	NT	NT	NT	NM
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	NM
01-May-14	NT	NT	NT	NT	NT	NT	NM
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	NT	NT	NT	NT	NT	NT	NM
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
14-Oct-15	U (0.0010)	U (0.0010)	U (0.0010)	U (0.0030)	U (0.01)	1.0	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	NM
28-Jan-16	U (0.0020)	U (0.0020)	U (0.0020)	U (0.0020)	U (0.050)	U (0.012)	NM
09-May-16	NT	NT	NT	NT	NT	NT	NM
24-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well VSC**

<b>Date</b>	<b>Benzene (mg/L)</b>	<b>Toluene (mg/L)</b>	<b>Ethylbenzene (mg/L)</b>	<b>Xylenes (mg/L)</b>	<b>GRO (mg/L)</b>	<b>DRO (mg/L)</b>	<b>GW Elev (feet)</b>
08-Feb-17	NT	NT	NT	NT	NT	NT	NM
25-Apr-17	NT	NT	NT	NT	NT	NT	NM
20-Oct-17	NT	NT	NT	NT	NT	NT	NM
13-Feb-18	NT	NT	NT	NT	NT	NT	NM
17-Aug-18	NT	NT	NT	NT	NT	NT	NM
25-Oct-18	U (0.003)	U (0.002)	U (0.003)	U (0.003)	U (0.25)	U (0.12)	61.28
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	NT	NT	NT	NT	NT	NT	NM
16-Jul-19	NT	NT	NT	NT	NT	NT	NM
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	NT	NT	NT	NT	NT	NT	NM
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	NA

Appendix D  
Tables of Historical Monitoring Data

**Monitoring Well AS-1**

<b>Date</b>	<b>Benzene (mg/L)</b>	<b>Toluene (mg/L)</b>	<b>Ethylbenzene (mg/L)</b>	<b>Xylenes (mg/L)</b>	<b>GRO (mg/L)</b>	<b>DRO (mg/L)</b>	<b>GW Elev (feet)</b>
02-Feb-07	U (0.0005)	U (0.0005)	U (0.0005)	U (0.0015)	U (0.05)	U (0.403)	NM
19-Apr-07	NT	NT	NT	NT	NT	NT	NM
07-Aug-07	NT	NT	NT	NT	NT	NT	NM
23-Oct-07	NT	NT	NT	NT	NT	NT	NM
22-Feb-08	NT	NT	NT	NT	NT	NT	NM
15-Apr-08	NT	NT	NT	NT	NT	NT	NM
27-Aug-08	NT	NT	NT	NT	NT	NT	NM
22-Oct-08	NT	NT	NT	NT	NT	NT	NM
05-Feb-09	NT	NT	NT	NT	NT	NT	NM
08-Apr-09	NT	NT	NT	NT	NT	NT	NM
09-Jul-09	NT	NT	NT	NT	NT	NT	NM
04-Nov-09	NT	NT	NT	NT	NT	NT	NM
27-Jan-10	NT	NT	NT	NT	NT	NT	NM
27-May-10	NT	NT	NT	NT	NT	NT	NM
19-Aug-10	NT	NT	NT	NT	NT	NT	NM
26-Oct-10	NT	NT	NT	NT	NT	NT	NM
17-Feb-11	NT	NT	NT	NT	NT	NT	NM
09-Jun-11	NT	NT	NT	NT	NT	NT	NM
20-Sep-11	NT	NT	NT	NT	NT	NT	NM
21-Oct-11	NT	NT	NT	NT	NT	NT	NM
17-Feb-12	NT	NT	NT	NT	NT	NT	NM
17-May-12	NT	NT	NT	NT	NT	NT	NM
05-Sep-12	NT	NT	NT	NT	NT	NT	NM
30-Oct-12	NT	NT	NT	NT	NT	NT	NM
30-Jan-13	NT	NT	NT	NT	NT	NT	NM
10-May-13	NT	NT	NT	NT	NT	NT	NM
11-Oct-13	NT	NT	NT	NT	NT	NT	NM
11-Dec-13	NT	NT	NT	NT	NT	NT	NM
19-Feb-14	NT	NT	NT	NT	NT	NT	NM
01-May-14	NT	NT	NT	NT	NT	NT	NM
30-Oct-14	NT	NT	NT	NT	NT	NT	NM
11-Feb-15	NT	NT	NT	NT	NT	NT	NM
15-May-15	NT	NT	NT	NT	NT	NT	NM
02-Sep-15	NT	NT	NT	NT	NT	NT	NM
12-Nov-15	NT	NT	NT	NT	NT	NT	NM
28-Jan-16	NT	NT	NT	NT	NT	NT	NM
09-May-16	NT	NT	NT	NT	NT	NT	NM
24-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM
08-Feb-17	NT	NT	NT	NT	NT	NT	NM
25-Apr-17	NT	NT	NT	NT	NT	NT	NM
20-Oct-17	NT	NT	NT	NT	NT	NT	NM
13-Feb-18	NT	NT	NT	NT	NT	NT	NM
17-Aug-18	NT	NT	NT	NT	NT	NT	NM
25-Oct-18	NT	NT	NT	NT	NT	NT	NM
26-Feb-19	NT	NT	NT	NT	NT	NT	NM
24-Apr-19	NT	NT	NT	NT	NT	NT	NM
16-Jul-19	NT	NT	NT	NT	NT	NT	NM
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	NT	NT	NT	NT	NT	NT	NM
02-Oct-20	NT	NT	NT	NT	NT	NT	NM
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

Appendix D  
Tables of Historical Monitoring Data

**Remediation Well RW16-1**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
24-Oct-16	U (0.0002)	0.019	1.7	10.1	30	4.6	NM
09-Dec-16	NT	NT	NT	NT	NT	NT	NM
08-Feb-17	U (0.002)	0.0048	7.9	8.9	25	2.7	NM
25-Apr-17	U (0.002)	U (0.001)	U (0.750)	4.83	12	2.4	NM
20-Oct-17	NT	NT	NT	NT	NT	NT	64.44
13-Feb-18	NT	NT	NT	NT	NT	NT	63.41
17-Aug-18	U (0.003)	0.0018 J	1.2	8.5	24	7.9	64.14
25-Oct-18	NT	NT	NT	NT	NT	NT	68.84
26-Feb-19	NT	NT	NT	NT	NT	NT	63.80
24-Apr-19	NT	NT	NT	NT	NT	NT	NM
16-Jul-19	NT	NT	NT	NT	NT	NT	64.06
17-Oct-19	NT	NT	NT	NT	NT	NT	NM
12-Aug-20	0.00092	0.00558	1.58	8.26	5.85	2	67.50
02-Oct-20	U (0.020)	0.0174 J	0.373	1.721	3.99	3.58	67.21
31-Mar-21	U (0.020)	U (0.020)	1.33	5.28	14	4.72	67.78
18-May-21	U (0.200)	U (0.200)	0.761	4.8	3.38	7.24	66.13
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>

**Monitoring Well MW16-2**

Date	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)	GW Elev (feet)
25-Oct-16	NT	NT	NT	NT	NT	NT	NM
09-Dec-16	U (0.0002)	U (0.001)	0.022	0.429	2	0.25	NM
08-Feb-17	U (0.002)	0.0078	0.44	3.3	19	2.1	NM
25-Apr-17	U (0.0002)	U (0.002)	U (0.30)	1	8.7	0.86	NM
20-Oct-17	U (0.002)	U (0.002)	0.042	0.125	2.2	0.26	64.50
13-Feb-18	U (0.002)	U (0.002)	0.051	0.177	6.1	0.59	63.62
17-Aug-18	U (0.003)	U (0.002)	0.015	0.0771	2.4	0.63	64.26
25-Oct-18	U (0.003)	U (0.002)	0.0036	0.013	1	0.31	64.32
26-Feb-19	U (0.003)	U (0.002)	0.0066	0.023	4.6	1.1	62.77
24-Apr-19	U (0.003)	U (0.002)	0.0065	0.027	4.2	0.58	63.62
16-Jul-19	U (0.003)	U (0.002)	0.0066	0.031	3.4	0.67	64.30
17-Oct-19	U (0.003)	U (0.002)	0.0052	0.023	2.1	0.30	67.16
12-Aug-20	U (0.001)	U (0.001)	0.00166	0.00735	1.65	0.419	67.39
02-Oct-20	U (0.001)	U (0.001)	0.000720 J	0.002772	0.967	0.250 J	67.08
31-Mar-21	U (0.001)	U (0.001)	0.001 J	0.00276 J	2.86	0.585 J	65.22
18-May-21	U (0.00100)	U (0.00100)	U (0.00100)	U (0.00200)	0.419	U (0.800)	66.30
<b>GCLs</b>	<b>0.0046</b>	<b>1.1</b>	<b>0.015</b>	<b>0.19</b>	<b>2.2</b>	<b>1.5</b>	<b>NA</b>



Appendix D  
Tables of Historical Monitoring Data

Key:

\* - Air lift pump causes water elevation to fluctuate. An average groundwater elevation is reported.

DRO - diesel range organics

GCL - ground water cleanup levels

GRO - gasoline range organics

GW - ground water

H - sample was prepped or analyzed beyond the specified holding time

mg/L - milligrams per liter

NA - not applicable

NM - not measured

NT - not tested

U - Undetected above practical quantitation limits.

**Bold, shade indicates the concentration exceeds the GCL or, if not detected, the reporting limit exceeds the GCL**

B - the same analyte is found in the associated trip blank

J - the identification of the analyte is acceptable; the reported value is an estimate

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## **APPENDIX E**

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### *Laboratory Analytical Report and ADEC Laboratory Data Review Checklist*

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**Stantec - Anchorage, AK - Speedway**

Sample Delivery Group: L1356623  
Samples Received: 05/21/2021  
Project Number:  
Description: Speedway 5325  
Site: 0005325  
Report To: Mr. John Marshall  
725 E Fireweed Lane  
Suite 200  
Anchorage, AK 99503

Entire Report Reviewed By:



Craig Cothron  
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

**Pace Analytical National**12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 [www.pacenational.com](http://www.pacenational.com)

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<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

# SAMPLE SUMMARY

## G-01 L1356623-01 GW

				Collected by John Marshall	Collected date/time 05/18/21 12:56	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:09	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1680021	1	06/01/21 12:09	06/01/21 12:09	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 18:14	05/28/21 18:14	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1.05	05/28/21 09:26	05/28/21 15:18	JN	Mt. Juliet, TN

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

## G-03 L1356623-02 GW

				Collected by John Marshall	Collected date/time 05/18/21 13:50	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:12	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1675683	1	05/23/21 01:09	05/23/21 01:09	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 18:34	05/28/21 18:34	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	10	05/28/21 09:26	06/01/21 06:02	DMG	Mt. Juliet, TN

## G-05 L1356623-03 GW

				Collected by John Marshall	Collected date/time 05/18/21 12:18	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:15	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1675683	1	05/23/21 01:31	05/23/21 01:31	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 18:55	05/28/21 18:55	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1	05/28/21 09:26	05/28/21 15:38	JN	Mt. Juliet, TN

## G-07 L1356623-04 GW

				Collected by John Marshall	Collected date/time 05/18/21 11:37	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:18	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1675683	1	05/23/21 01:53	05/23/21 01:53	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 19:15	05/28/21 19:15	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1	05/28/21 09:26	05/28/21 15:58	JN	Mt. Juliet, TN

## MW16-02 L1356623-05 GW

				Collected by John Marshall	Collected date/time 05/18/21 14:35	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:20	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1675683	1	05/23/21 02:14	05/23/21 02:14	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 19:35	05/28/21 19:35	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1	05/28/21 09:26	05/28/21 16:18	JN	Mt. Juliet, TN

## RW16-01 L1356623-06 GW

				Collected by John Marshall	Collected date/time 05/18/21 15:40	Received date/time 05/21/21 09:30
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	5	06/07/21 16:48	06/08/21 12:11	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1680021	20	06/01/21 12:31	06/01/21 12:31	TPR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	200	05/28/21 22:38	05/28/21 22:38	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1.05	05/28/21 09:26	06/01/21 05:42	DMG	Mt. Juliet, TN

ACCOUNT:

Stantec - Anchorage, AK - Speedway

PROJECT:

SDG:

L1356623

DATE/TIME:

06/09/21 15:32

PAGE:

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# SAMPLE SUMMARY

## DUP1 L1356623-07 GW

Collected by  
John Marshall

Collected date/time  
05/18/21 14:35

Received date/time  
05/21/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010C	WG1683965	1	06/07/21 16:48	06/08/21 10:26	EL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG1675683	1	05/23/21 02:58	05/23/21 02:58	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 19:56	05/28/21 19:56	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG1678702	1.05	05/28/21 09:26	05/28/21 16:39	JN	Mt. Juliet, TN

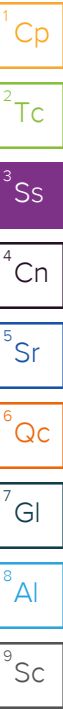
## TRIP BLANK L1356623-08 GW

Collected by  
John Marshall

Collected date/time  
05/18/21 12:00

Received date/time  
05/21/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1679342	1	05/28/21 16:32	05/28/21 16:32	ADM	Mt. Juliet, TN

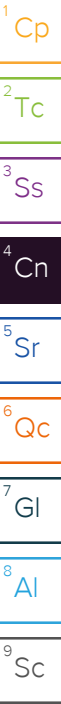


# CASE NARRATIVE

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



Craig Cothron  
Project Manager



## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	16.4		0.504	3.00	1	06/08/2021 10:09	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	0.0152	<a href="#">B J</a>	0.0100	0.100	1	06/01/2021 12:09	<a href="#">WG1680021</a>
(S) a,a,a-Trifluorotoluene(FID)	97.9			50.0-150		06/01/2021 12:09	<a href="#">WG1680021</a>
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		06/01/2021 12:09	<a href="#">WG1680021</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
sec-Butylbenzene	U		0.000125	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
Ethylbenzene	U		0.000137	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
Isopropylbenzene	U		0.000105	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 18:14	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 18:14	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 18:14	<a href="#">WG1679342</a>
(S) Toluene-d8	105			80.0-120		05/28/2021 18:14	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	92.9			77.0-126		05/28/2021 18:14	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	117			70.0-130		05/28/2021 18:14	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	0.405	<a href="#">J</a>	0.240	0.840	1.05	05/28/2021 15:18	<a href="#">WG1678702</a>
(S) o-Terphenyl	112			50.0-150		05/28/2021 15:18	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	32.2		0.504	3.00	1	06/08/2021 10:12	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	1.36		0.0100	0.100	1	05/23/2021 01:09	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(FID)	108			50.0-150		05/23/2021 01:09	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(PID)	108			79.0-125		05/23/2021 01:09	<a href="#">WG1675683</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
sec-Butylbenzene	0.00354		0.000125	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
Ethylbenzene	0.00111		0.000137	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
Isopropylbenzene	0.00602		0.000105	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 18:34	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	0.0452		0.000322	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	0.0457		0.000104	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
m&p-Xylene	0.00102	<a href="#">J</a>	0.000430	0.00200	1	05/28/2021 18:34	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 18:34	<a href="#">WG1679342</a>
(S) Toluene-d8	105			80.0-120		05/28/2021 18:34	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	97.1			77.0-126		05/28/2021 18:34	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	107			70.0-130		05/28/2021 18:34	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	8.48		2.29	8.00	10	06/01/2021 06:02	<a href="#">WG1678702</a>
(S) o-Terphenyl	124			50.0-150		06/01/2021 06:02	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	13.9		0.504	3.00	1	06/08/2021 10:15	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	0.0693	<a href="#">B J</a>	0.0100	0.100	1	05/23/2021 01:31	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(FID)	108			50.0-150		05/23/2021 01:31	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		05/23/2021 01:31	<a href="#">WG1675683</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
sec-Butylbenzene	U		0.000125	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
Ethylbenzene	0.00170		0.000137	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
Isopropylbenzene	0.000309	<a href="#">J</a>	0.000105	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 18:55	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	0.000191	<a href="#">J</a>	0.000104	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 18:55	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 18:55	<a href="#">WG1679342</a>
(S) Toluene-d8	105			80.0-120		05/28/2021 18:55	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	92.4			77.0-126		05/28/2021 18:55	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	113			70.0-130		05/28/2021 18:55	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	U		0.229	0.800	1	05/28/2021 15:38	<a href="#">WG1678702</a>
(S) o-Terphenyl	94.2			50.0-150		05/28/2021 15:38	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	9.55		0.504	3.00	1	06/08/2021 10:18	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	0.0320	<a href="#">B J</a>	0.0100	0.100	1	05/23/2021 01:53	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(FID)	111			50.0-150		05/23/2021 01:53	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(PID)	102			79.0-125		05/23/2021 01:53	<a href="#">WG1675683</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
sec-Butylbenzene	U		0.000125	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
Ethylbenzene	U		0.000137	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
Isopropylbenzene	U		0.000105	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 19:15	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 19:15	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 19:15	<a href="#">WG1679342</a>
(S) Toluene-d8	103			80.0-120		05/28/2021 19:15	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	90.1			77.0-126		05/28/2021 19:15	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	112			70.0-130		05/28/2021 19:15	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	U		0.229	0.800	1	05/28/2021 15:58	<a href="#">WG1678702</a>
(S) o-Terphenyl	97.0			50.0-150		05/28/2021 15:58	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	4.72		0.504	3.00	1	06/08/2021 10:20	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	0.419		0.0100	0.100	1	05/23/2021 02:14	<a href="#">WG1675683</a>
(S)							
a,a,a-Trifluorotoluene(FID)	98.9			50.0-150		05/23/2021 02:14	<a href="#">WG1675683</a>
(S)							
a,a,a-Trifluorotoluene(PID)	104			79.0-125		05/23/2021 02:14	<a href="#">WG1675683</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
sec-Butylbenzene	0.000920	<u>J</u>	0.000125	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
Ethylbenzene	U		0.000137	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
Isopropylbenzene	0.000753	<u>J</u>	0.000105	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
Naphthalene	U	<u>C3</u>	0.00100	0.00500	1	05/28/2021 19:35	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	0.0110		0.000322	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	0.0103		0.000104	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 19:35	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 19:35	<a href="#">WG1679342</a>
(S) Toluene-d8	107			80.0-120		05/28/2021 19:35	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	94.6			77.0-126		05/28/2021 19:35	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	111			70.0-130		05/28/2021 19:35	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	U		0.229	0.800	1	05/28/2021 16:18	<a href="#">WG1678702</a>
(S) o-Terphenyl	100			50.0-150		05/28/2021 16:18	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	24.1		2.52	15.0	5	06/08/2021 12:11	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	3.38		0.200	2.00	20	06/01/2021 12:31	<a href="#">WG1680021</a>
(S) a,a,a-Trifluorotoluene(FID)	95.9			50.0-150		06/01/2021 12:31	<a href="#">WG1680021</a>
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125		06/01/2021 12:31	<a href="#">WG1680021</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0188	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.0314	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
sec-Butylbenzene	U		0.0250	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.0254	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
Ethylbenzene	0.761		0.0274	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
Isopropylbenzene	0.126	J	0.0210	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
Naphthalene	U	C3	0.200	1.00	200	05/28/2021 22:38	<a href="#">WG1679342</a>
Toluene	U		0.0556	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	2.50		0.0644	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	0.530		0.0208	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
m&p-Xylene	3.89		0.0860	0.400	200	05/28/2021 22:38	<a href="#">WG1679342</a>
o-Xylene	0.908		0.0348	0.200	200	05/28/2021 22:38	<a href="#">WG1679342</a>
(S) Toluene-d8	105			80.0-120		05/28/2021 22:38	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	99.3			77.0-126		05/28/2021 22:38	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	113			70.0-130		05/28/2021 22:38	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	7.24		0.240	0.840	1.05	06/01/2021 05:42	<a href="#">WG1678702</a>
(S) o-Terphenyl	115			50.0-150		06/01/2021 05:42	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Metals (ICP) by Method 6010C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Sodium	4.86		0.504	3.00	1	06/08/2021 10:26	<a href="#">WG1683965</a>

## Volatile Organic Compounds (GC) by Method AK101

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPHGAK C6 to C10	0.751		0.0100	0.100	1	05/23/2021 02:58	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(FID)	107			50.0-150		05/23/2021 02:58	<a href="#">WG1675683</a>
(S) a,a,a-Trifluorotoluene(PID)	107			79.0-125		05/23/2021 02:58	<a href="#">WG1675683</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
sec-Butylbenzene	0.00114		0.000125	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
Ethylbenzene	U		0.000137	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
Isopropylbenzene	0.00106		0.000105	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 19:56	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	0.0174		0.000322	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	0.0143		0.000104	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 19:56	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 19:56	<a href="#">WG1679342</a>
(S) Toluene-d8	109			80.0-120		05/28/2021 19:56	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	93.4			77.0-126		05/28/2021 19:56	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	112			70.0-130		05/28/2021 19:56	<a href="#">WG1679342</a>

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	U		0.240	0.840	1.05	05/28/2021 16:39	<a href="#">WG1678702</a>
(S) o-Terphenyl	98.6			50.0-150		05/28/2021 16:39	<a href="#">WG1678702</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
n-Butylbenzene	U		0.000157	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
sec-Butylbenzene	U		0.000125	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
tert-Butylbenzene	U		0.000127	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
Ethylbenzene	U		0.000137	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
Isopropylbenzene	U		0.000105	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
Naphthalene	U	<a href="#">C3</a>	0.00100	0.00500	1	05/28/2021 16:32	<a href="#">WG1679342</a>
Toluene	U		0.000278	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
m&p-Xylene	U		0.000430	0.00200	1	05/28/2021 16:32	<a href="#">WG1679342</a>
o-Xylene	U		0.000174	0.00100	1	05/28/2021 16:32	<a href="#">WG1679342</a>
(S) Toluene-d8	105			80.0-120		05/28/2021 16:32	<a href="#">WG1679342</a>
(S) 4-Bromofluorobenzene	91.4			77.0-126		05/28/2021 16:32	<a href="#">WG1679342</a>
(S) 1,2-Dichloroethane-d4	112			70.0-130		05/28/2021 16:32	<a href="#">WG1679342</a>

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

Method Blank (MB)

(MB) R3664572-1 06/08/21 09:28

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Sodium	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R3664572-2 06/08/21 09:30

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Sodium	10.0	9.80	98.0	80.0-120	

L1356626-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356626-04 06/08/21 09:33 • (MS) R3664572-4 06/08/21 09:39 • (MSD) R3664572-5 06/08/21 09:42

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Sodium	10.0	5.99	15.8	15.8	97.9	97.7	1	75.0-125			0.119	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc



Method Blank (MB)

(MB) R3660972-2 05/22/21 21:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPHGAK C6 to C10	0.0235	J	0.0100	0.100
(S) a,a,a-Trifluorotoluene(PID)	100			79.0-125
(S) a,a,a-Trifluorotoluene(FID)	95.6			60.0-120

Laboratory Control Sample (LCS)

(LCS) R3660972-1 05/22/21 20:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHGAK C6 to C10	5.00	4.88	97.6	60.0-120	
(S) a,a,a-Trifluorotoluene(PID)			128	79.0-125	J1
(S) a,a,a-Trifluorotoluene(FID)			112	60.0-120	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R3662481-3 06/01/21 11:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPHGAK C6 to C10	0.0162	J	0.0100	0.100
(S) a,a,a-Trifluorotoluene(PID)	103			79.0-125
(S) a,a,a-Trifluorotoluene(FID)	95.9			60.0-120

Laboratory Control Sample (LCS)

(LCS) R3662481-1 06/01/21 08:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHGAK C6 to C10	5.00	5.02	100	60.0-120	
(S) a,a,a-Trifluorotoluene(PID)			133	79.0-125	J1
(S) a,a,a-Trifluorotoluene(FID)			102	60.0-120	

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Method Blank (MB)

(MB) R3661783-2 05/28/21 15:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Ethylbenzene	U		0.000137	0.00100
Isopropylbenzene	U		0.000105	0.00100
Naphthalene	U		0.00100	0.00500
Toluene	U		0.000278	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
o-Xylene	U		0.000174	0.00100
m&p-Xylenes	U		0.000430	0.00200
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	90.4			77.0-126
(S) 1,2-Dichloroethane-d4	113			70.0-130

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

(LCS) R3661783-1 05/28/21 14:10 • (LCSD) R3661783-5 05/29/21 00:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00439	0.00426	87.8	85.2	70.0-123			3.01	20
n-Butylbenzene	0.00500	0.00521	0.00495	104	99.0	73.0-125			5.12	20
sec-Butylbenzene	0.00500	0.00542	0.00494	108	98.8	75.0-125			9.27	20
tert-Butylbenzene	0.00500	0.00539	0.00510	108	102	76.0-124			5.53	20
Ethylbenzene	0.00500	0.00464	0.00461	92.8	92.2	79.0-123			0.649	20
Isopropylbenzene	0.00500	0.00491	0.00484	98.2	96.8	76.0-127			1.44	20
Naphthalene	0.00500	0.00391	0.00462	78.2	92.4	54.0-135			16.6	20
Toluene	0.00500	0.00444	0.00420	88.8	84.0	79.0-120			5.56	20
1,2,4-Trimethylbenzene	0.00500	0.00532	0.00485	106	97.0	76.0-121			9.24	20
1,3,5-Trimethylbenzene	0.00500	0.00547	0.00497	109	99.4	76.0-122			9.58	20
o-Xylene	0.00500	0.00448	0.00456	89.6	91.2	80.0-122			1.77	20
m&p-Xylenes	0.0100	0.00953	0.00928	95.3	92.8	80.0-122			2.66	20
(S) Toluene-d8				104	104	80.0-120				
(S) 4-Bromofluorobenzene				99.1	102	77.0-126				
(S) 1,2-Dichloroethane-d4				108	109	70.0-130				

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1356653-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1356653-13 05/28/21 21:37 • (MS) R3661783-3 05/28/21 22:59 • (MSD) R3661783-4 05/28/21 23:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00226	0.00671	0.00660	89.0	86.8	1	17.0-158			1.65	27
n-Butylbenzene	0.00500	0.000708	0.00547	0.00527	95.2	91.2	1	31.0-150			3.72	30
sec-Butylbenzene	0.00500	0.00108	0.00598	0.00597	98.0	97.8	1	33.0-155			0.167	29
tert-Butylbenzene	0.00500	0.000392	0.00577	0.00570	108	106	1	34.0-153			1.22	28
Ethylbenzene	0.00500	0.00406	0.00827	0.00875	84.2	93.8	1	30.0-155			5.64	27
Isopropylbenzene	0.00500	0.00329	0.00800	0.00793	94.2	92.8	1	28.0-157			0.879	27
Naphthalene	0.00500	0.00371	0.00666	0.00721	59.0	70.0	1	12.0-156			7.93	35
Toluene	0.00500	0.00346	0.00774	0.00770	85.6	84.8	1	26.0-154			0.518	28
1,2,4-Trimethylbenzene	0.00500	0.00358	0.00820	0.00849	92.4	98.2	1	26.0-154			3.48	27
1,3,5-Trimethylbenzene	0.00500	0.000763	0.00606	0.00598	106	104	1	28.0-153			1.33	27
o-Xylene	0.00500	0.00130	0.00605	0.00583	95.0	90.6	1	45.0-144			3.70	26
m&p-Xylenes	0.0100	0.00280	0.0120	0.0122	92.0	94.0	1	43.0-146			1.65	26
(S) Toluene-d8					103	99.5		80.0-120				
(S) 4-Bromofluorobenzene					101	98.1		77.0-126				
(S) 1,2-Dichloroethane-d4					112	111		70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3660707-1 05/28/21 12:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
AK102 DRO C10-C25	U		0.229	0.800
(S) o-Terphenyl	111			60.0-120

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

(LCS) R3660707-2 05/28/21 12:36 • (LCSD) R3660707-3 05/28/21 12:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	3.00	3.15	2.86	105	95.3	75.0-125			9.65	20
(S) o-Terphenyl				137	127	60.0-120	J1	J1		

1  
Cp

2  
Tc

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Ss

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Cn

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Sr

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Qc

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Gl

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Al

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Sc

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

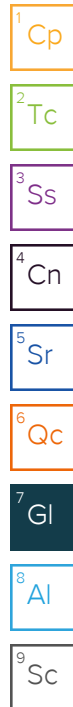
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

### Abbreviations and Definitions

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

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.



# ACCREDITATIONS & LOCATIONS

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1 4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

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

\* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

\* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: <b>Stantec - Anchorage, AK - Speedway</b>  725 E Fireweed Lane Suite 200 Anchorage, AK 99503		Billing Information: Accounts Payable PO Box 1510 Springfield, OH 45501		Chain of Custody		Page 1 of 1	
Report to: <b>Mr. John Marshall</b>		Email To: craig.cothron@pacelabs.com		Pres Chk		Pace Analytical®  12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <a href="https://info.pacelabs.com/hubs/pas-standard-terms.pdf">https://info.pacelabs.com/hubs/pas-standard-terms.pdf</a>	
Project Description: <b>Speedway 5325</b>		City/State Collected: <b>Wasilla, AK</b>		Please Circle: PT MT CT ET			
Phone: <b>907-266-1108</b>		Client Project # <b>185705363</b>		Lab Project # <b>STAAAKSSA-5325</b>			
Collected by (print): <b>John Marshall</b>		Site/Facility ID # <b>0005325</b>		P.O. #			
Collected by (signature): <b>[Signature]</b>		Rush? (Lab MUST Be Notified) Same Day Five Day Next Day 5 Day (Rad Only) Two Day 10 Day (Rad Only) Three Day <b>Standard</b>		Quote #			
Immediately Packed on Ice N <input checked="" type="checkbox"/> Y <input type="checkbox"/>		Date Results Needed		No. of Cntrs			
Sample ID		Comp/Grab	Matrix *	Depth	Date	Time	
G-01	6	GW	-	5/18/21	1256	9	X
G-03	6	GW	-	5/18/21	1350	79	X
G-05	6	GW	-	5/18/21	1218	9	X
G-07	6	GW	-	5/18/21	1137	9	X
MW16-02	6	GW	-	5/18/21	1435	9	X
RW16-01	6	GW	-	5/18/21	1540	89	X
DUP1	6	GW	-	5/18/21	1435	9	X
TRIP BLANK	-	GW	-	5/18/21	1200	1	X
* Matrix: SS - Soil AIR - Air F - Filter <b>GW - Groundwater</b> B - Bioassay WW - WasteWater DW - Drinking Water OT - Other		Remarks:		pH _____ Temp _____ Flow _____ Other _____		Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> NP COC Signed/Accurate: <input checked="" type="checkbox"/> Bottles arrive intact: <input checked="" type="checkbox"/> Correct bottles used: <input checked="" type="checkbox"/> Sufficient volume sent: <input checked="" type="checkbox"/> If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Preservation Correct/Checked: <input checked="" type="checkbox"/> RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/>	
Samples returned via: _ UPS _ FedEx _ Courier		Tracking # <b>5016 1228 2212</b>					
Relinquished by (Signature): <b>[Signature]</b>		Date: <b>5/20/21</b>	Time: <b>0845</b>	Received by: (Signature) <b>[Signature]</b>		Trip Blank Received: Yes/No HCL/MeOH TBR	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Temp: <b>1.0 + 0 = 1.0</b> °C Bottles Received: <b>6</b>	
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature) <b>[Signature]</b>		Date: <b>5/21/21</b> Time: <b>9:30</b>	
				Hold:		Condition: NCF / <b>OK</b>	



## **Laboratory Data Review Checklist**

Completed By:

Jeremiah Malenfant

Title:

Intern, Environmental Services

Date:

6/25/21

Consultant Firm:

Stantec Consulting Services Inc.

Laboratory Name:

Pace Analytical

Laboratory Report Number:

L1356623

Laboratory Report Date:

6/9/21

CS Site Name:

Speedway 5325 (Tesoro 2Go Mart 52)

ADEC File Number:

2265.26.006

Hazard Identification Number:

648

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Laboratory Report Date:

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CS Site Name:

Speedway 5325 (Tesoro 2Go Mart 52)

**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:

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

Yes ☒ No ☐ N/A ☐ Comments:

3 total broken VOA samples: two from G-03 and one from RW16-01

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:

Extreme dilution (1.05 – 200x) in samples from RW16-01 as well as DRO diluted to 10x in G-03

#### 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:

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:

Case narrative states that all anomalies which might affect data quality are noted, but does not note any specific impacts on data quality.

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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:

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

Yes ☐ No ☒ N/A ☐ Comments:

High dilution in samples from RW16-01 caused the LOQ to be above the Cleanup Level for BTEX (except Toluene)

e. Data quality or usability affected?

The reported values for Ethylbenzenes and Xylenes in RW16-01 were above the cleanup levels regardless of the LOQ, but for Benzene it is unknown whether there is an exceedance or not because of the elevated LOQ.

6. QC Samples

a. Method Blank

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

Yes ☒ No ☐ N/A ☐ Comments:

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

Yes ☐ No ☒ N/A ☐ Comments:

Method blanks for GRO by method AK101 are above the MDL

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

Comments:

G-01, G-05, and G-07 are affected

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

Yes ☒ No ☐ N/A ☐ Comments:

Yes; affected samples are marked with the "B" tag.

v. Data quality or usability affected?

Comments:

No; the concentrations detected in the method blanks are well below the Cleanup Level

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:

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:

Both GRO and DRO Laboratory Control Samples had recovery percentages outside the recovery limits.

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- 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:

G-01, G-05, and G-07 for GRO, and G-01 for DRO as well

- 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:

The affected values are below ADEC Cleanup levels and were influenced by issues identified in section above.

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

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

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

Yes ☒ No ☐ 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:

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- 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:

No.

- 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:

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iv. Data quality or usability affected?

Comments:

N/A

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:



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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:

estimated values were given for some of the duplicate values

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:

All disposable containers used.

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:

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

a. Defined and appropriate?

Yes ☒ No ☐ N/A ☐

Comments: