

Speedway Store 5314

(7-Eleven Store 46745 - Former TNS 76)

Q4 October 2024

GWM Event Report

ADEC File #2265.26.037



AUTHORIZATION TO SUBMIT REPORT

Stantec has been authorized by the client, 7-Eleven (representative Paula Sime, PG, Manager – Environmental Services) to submit the enclosed report titled “Speedway 5314 (7-Eleven 46745 - Former TNS 76, 4Q October 2024 GWM Event Report” dated December 2024, to the Alaska Department of Environmental Conservation. If you have any questions or need additional information concerning this report, please contact me at (907) 227-9883 or via email at bob.gilfilian@stantec.com.

Regards,

STANTEC CONSULTING SERVICES, INC.

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska Test Method
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
IW	injection well
Klozur [®] One	Trademarked chemical oxidizer developed by PeroxyChem
mg/L	milligrams per liter
MW	monitoring well
PAH	polycyclic aromatic hydrocarbon
ORP	oxidation-reduction potential
QA	quality assurance
QC	quality control
Speedway	Speedway, LLC
Stantec	Stantec Consulting Services, Inc.
Tesoro	Tesoro Refining and Marketing Company
TMB	Trimethylbenzene
UST	underground storage tank
VOC	Volatile Organic Compounds

1.0 INTRODUCTION

This Groundwater Monitoring Event Report was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of Speedway Store 5314 (7-Eleven Store 46745 - Former TNS 76), located at 3600 Palmer-Wasilla Highway, Wasilla, Alaska (**Figure 1**). Background and historical information for this site is summarized in **Appendix A**. The methods used for this monitoring event were conducted in accordance with the Alaska Department of Environmental Conservation (ADEC) approved 2024 Corrective Action Plan (CAP) for this site. The 2024 CAP work plan tasks are summarized in **Appendix B**.

This fourth quarter 2024 groundwater monitoring event was conducted on October 25, 2024, by Stantec environmental staff Sydney Souza, Environmental Geologist; and Jeremiah Malenfant, Geologist-in-Training. Stantec field staff were unable to complete the monthly chemical oxidation (chemox) injection event due to below freezing temperatures and snow.

2.0 FIELD ACTIVITIES

On October 25, 2024, Stantec completed the following field activities as part of this groundwater monitoring event:

- Measured the depth to groundwater in Monitoring Wells MW-1, MW-2, MW-3, MW-4, and RW19-1. Groundwater depth measurements were used by the SampleServe™ program to calculate the hydraulic gradient and direction of flow of the groundwater table.
- Measured the following intrinsic water quality parameters in four monitoring/remediation wells: pH, temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP), and specific conductance.
- Collected groundwater samples from all five monitoring/remediation wells and a duplicate (of MW-3) and submitted them for laboratory analysis of: U.S. Environmental Protection Agency (EPA) Method 8260C for petroleum fuel associated volatile organic compounds including benzene, toluene, ethylbenzene, and xylenes (BTEX), 1,2,4- Trimethylbenzene (TMB) and 1,3,5-TMB, as well as polycyclic aromatic hydrocarbons (PAHs), specifically naphthalene, by EPA 8270D; Alaska Test Method (AK)101 for GRO; AK102 for DRO; and metals by EPA 6010C (ICP) for sodium.
- A surface water grab sample (labeled Wetland) was collected from ponded water associated with the wetland area located in the depression just south of MW-3.

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

3.0 GROUNDWATER MONITORING RESULTS

3.1 GROUNDWATER ELEVATIONS

Table 1 presents groundwater elevations at this site based on the depths to static groundwater levels measured during this monitoring event. The recirculation pump in RW19-1 typically discharges on a continuous basis at about 1 gallon per minute (gpm) across all wells located in the “footprint” of the former underground storage tank (UST) shown on the site plan presented on **Figure 2**.

Table 1 Groundwater Elevations
Measured on October 25, 2024

Monitoring Well Identification	Top of Casing Elevation (feet relative to datum) ¹	Depth to Groundwater (feet btoc)	Groundwater Elevation (feet relative to datum) ¹
MW-1	94.73	18.10	76.63
MW-2	95.07	18.75	76.32
MW-3	94.46	17.10	77.36
MW-4	95.01	17.82	77.19
RW19-1	95.73	19.60	76.13

Key:

1 – Based on a vertical control survey of June 17, 2024, using an elevation datum of 100.0 feet established on the benchmark on the concrete base of the existing on-site drinking water well.

feet btoc – feet below top of monitoring well casing

The hydraulic gradient across the site was found to be approximately 0.033 feet per foot directed north at 14 degrees. The calculation of groundwater hydraulic flow was based on the static water levels in the five on-site wells measured with the groundwater recirculation pump running. The groundwater flow direction is consistent with past monitoring events; the northward direction is the typical flow regime without the influence of the groundwater recirculation well. A plot of groundwater elevation contours generated by the SampleServe software program, as well as a rose diagram, generated by the Surfer™ software program, of past groundwater direction and gradient, is included in **Figure 3**. The SampleServe program uses a combination of kriging and nearest-neighbor analyses to generate the contours.

3.2 INTRINSIC WATER QUALITY PARAMETERS

Intrinsic water quality data collected during this monitoring event is presented in **Table 2**. High specific conductance readings and higher ORP readings are indicative of the influence of chemox treatment.

Table 2 Intrinsic Water Quality Parameters
Measurements taken on October 25, 2024

Well ID	Volume Purged (gallons)	Temp. (°C)	pH	Dissolved Oxygen (mg/L)	ORP (mV)	Specific Conductance (µS/cm °C)
MW-1	4	6.0	6.45	1.15	1538	1661
MW-2	4	6.9	6.00	2.35	175.7	1876
MW-3	3	6.4	3.22	1.89	218.7	1439
MW-4	5	6.3	6.57	1.32	162.3	1214
RW19-1	5	6.6	6.19	2.33	185.4	1514
Wetland	NA	0.3	6.32	1.78	198.3	1202

Key:

°C –	degrees Celsius	ORP –	oxidation-reduction potential
µS/cm°C –	microSiemens per centimeter °C	pH –	-log [H+]
mg/L –	milligrams per liter	SC –	specific conductance at 25°C
mV –	millivolts	Temp. –	temperature
NA –	not applicable	NM –	Not Measured

3.3 ANALYTICAL WATER QUALITY DATA

Laboratory analytical results for BTEX, GRO, DRO, 1,2,4-TMB, 1,3,5-TMB, sodium, and naphthalene detected in groundwater samples collected during this monitoring event are summarized in **Tables 3a and 3b**. Historical results for the current and previous monitoring events are presented in **Appendix D**. The complete laboratory analytical report and laboratory data review checklist is provided in **Appendix E**.

A grab sample was collected from ponded surface water associated with a wetland (see **Figure 2** for location). This sample was collected to determine if subsurface contamination or runoff are impacting the wetlands to the south of the store in a depression approximately 15-feet below the ground surface of the store.

Table 3a Groundwater Analytical Results for BTEX, GRO, and DRO
Samples collected on October 25, 2024

Sample Identification	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)
MW-1	0.00265	U (0.00100)	U (0.00100)	U (0.00300)	0.0607 B,J	U (0.840)
MW-2	0.0377	0.00584	0.0141	0.00481	0.368 B	U (0.800)
MW-3	0.0258 Q	U (0.00500)	0.0316	0.004736 Q	0.517 B	0.593 J
DUP 1 (dup. of MW-3)	0.0310	0.000409 J	0.0907	0.06632	0.499 B	0.447 J
MW-4	0.0198	0.00200	0.0164	0.02925	0.412 B	U (0.840)
RW19-1	0.0833	U (0.00100)	0.0725	0.12435	0.571 B	U (0.840)
Wetland (surface water)	0.00476	U (0.00100)	0.0117	0.0307	0.454 B	0.223 J
Cameron Lot 7 (drinking water)	U (0.000500)	U (0.000500)	U (0.000500)	U (0.000500)	NA	NA
GCLs	0.0046	1.1	0.015	0.19	2.2	1.5

Table 3b Groundwater Analytical Results for Naphthalene, TMB, and Sodium
Samples collected on August 28, 2024

Sample Identification	1,2,4-TMB (mg/L)	1,3,5-TMB (mg/L)	Naphthalene ¹ (mg/L)	Sodium (mg/L)
MW-1	U (0.00100)	U (0.00100)	U (0.000250)	70.9
MW-2	U (0.00100)	U (0.00100)	0.00126	188
MW-3	0.000429 J,Q	0.000136 J,Q	0.00460	120
DUP (dup. of MW-3)	0.00696	0.000345	0.00538	121
MW-4	0.0242	0.00581	0.00109	110
RW19-1	0.00743	0.00104	0.000662	87.6
Wetland (surface water)	0.0261	0.0362	0.000281	76.5
Cameron Lot 7 (drinking water)	U (0.000500)	NA	NA	NA
GCLs	0.056	0.060	0.0017	NA

Key:

1 – Analyzed by EPA Method 8270D-SIM

DUP – Duplicate

B – The same analyte is found in the associated blank.

DRO – Diesel range organics, analyzed by AK102

GCLs – Groundwater cleanup levels, per ADEC 18 AAC 75.345, Table C, updated September 29, 2018.

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

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

GRO – Gasoline range organics, analyzed by AK101

AK – Alaska Test Method

mg/L – milligrams per liter

TMB – Trimethylbenzene

BTEX – benzene, toluene, ethylbenzene, and xylenes

U () – Undetected above laboratory reporting limits shown in parentheses.

Q – Sample re-analyzed outside of hold times due to surrogate failure

3.4 QUALITY ASSURANCE (QA)/ QUALITY CONTROL (QC) REVIEW

Pace analytical performed all analyses of groundwater samples for this sampling event. **Table 4** provides a summary of the laboratory QC objectives and outcomes for this monitoring event. Laboratory QC data and the ADEC Laboratory Data Review Checklist are included with the laboratory report in **Appendix E**.

All samples were extracted and analyzed within the relevant hold times. VOCs in sample MW-3 were re-analyzed outside hold times due to a surrogate failure. A duplicate sample set was collected to determine the precision of the field collection and laboratory analyses for this sampling event. Sample DUP is a duplicate of sample MW-3. The data presented in **Table 4** shows that the precision for the duplicate sample set was outside the established QA criteria for ethylbenzenes, total xylenes, and both TMBs. The surrogate failure may have contributed to low precision between the parent and duplicate samples.

Table 4 Laboratory Quality Control Objectives

Quality Control Designation	Tolerance	Results for this Event
Holding Times		
DRO/Water/to analyze	40 days	11 days
GRO/Water/to analyze	14 days	8-14 days
VOCs/Water/to analyze	14 days	12 days ¹
Field Duplicates – Precision		
Benzene/Water	± 30%	18.3%
Toluene/Water	± 30%	NC
Ethylbenzene/Water	± 30%	96.6%
Xylenes/Water	± 30%	173%
GRO/Water	± 30%	3.54%
DRO/Water	± 30%	28.1%
1,2,4-TMB/Water	± 30%	177%
1,3,5-TMB/Water	± 30%	86.9%
Naphthalene/Water	± 30%	15.6%
Sodium/Water	± 30%	0.830%

Key:

% – percent

± – plus or minus

¹ – VOCs reanalyzed outside of hold times in MW-3 due to surrogate failure

BTEX – benzene, toluene, ethylbenzene, and xylenes

DRO – diesel range organics

GRO – gasoline range organics

TMB – Trimethylbenzene

PAH – polycyclic aromatic hydrocarbon

VOC – Volatile Organic Compounds

NC – not calculated due to analyte being undetected in sample

4.0 REMEDIATION SYSTEM

The re-circulation of pumped groundwater from RW19-1 is coupled with periodic injection (typically monthly during the non-freeze time of year) of a chemox product that is injected into the three remediation wells (IW-1, IW-2, and IW-3). Stantec was unable to complete an October groundwater remediation event due to snow and below freezing conditions. Chemox injection will resume in the spring when temperatures rise and snow and ice have melted.

During the monitoring event, staff found that the recirculation pump in RW19-1 was not operating. After troubleshooting, it was found that the pump itself has been rendered inoperable, possibly due to a drop in groundwater elevation or ingestion of debris loosened by the recent well redevelopment in Q3. Repair or replacement has been scheduled for the beginning of 2025.

5.0 DISCUSSION OF FINDINGS

The laboratory analytical sample results showed petroleum associated analytes were present at concentrations exceeding ADEC groundwater cleanup levels (GCLs) as listed in Alaska Administrative Code (AAC) 18 AAC 75.345 Table C (9/18/2019) for the following monitoring wells:

- MW-2: Benzene.
- MW-3: Benzene, ethylbenzene, and naphthalene.
- MW-4: Benzene and ethylbenzene.
- RW19-1: Benzene and ethylbenzene.
- Wetland (surface water): Benzene.

No analyte was detected above GCLs in MW-1 or in the drinking water sample from the store.

The hydraulic gradient across the site was found to be approximately 0.033 feet per foot directed north at 14 degrees. The calculation of groundwater hydraulic flow was based on the static water levels in the five on-site wells measured with the groundwater recirculation pump not running. The groundwater flow direction is consistent with past monitoring events; the northward direction is the typical flow regime without the recirculation well.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The annual work session is planned to be held December 10, 2024. No other anomalies were found during the third quarter 2024 monitoring event that would require additional corrective action or changes to the ADEC-approved year 2024 Corrective Action Work Plan for this site.

7.0 LIMITATIONS

Stantec conducted this monitoring event in accordance with the 2024 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

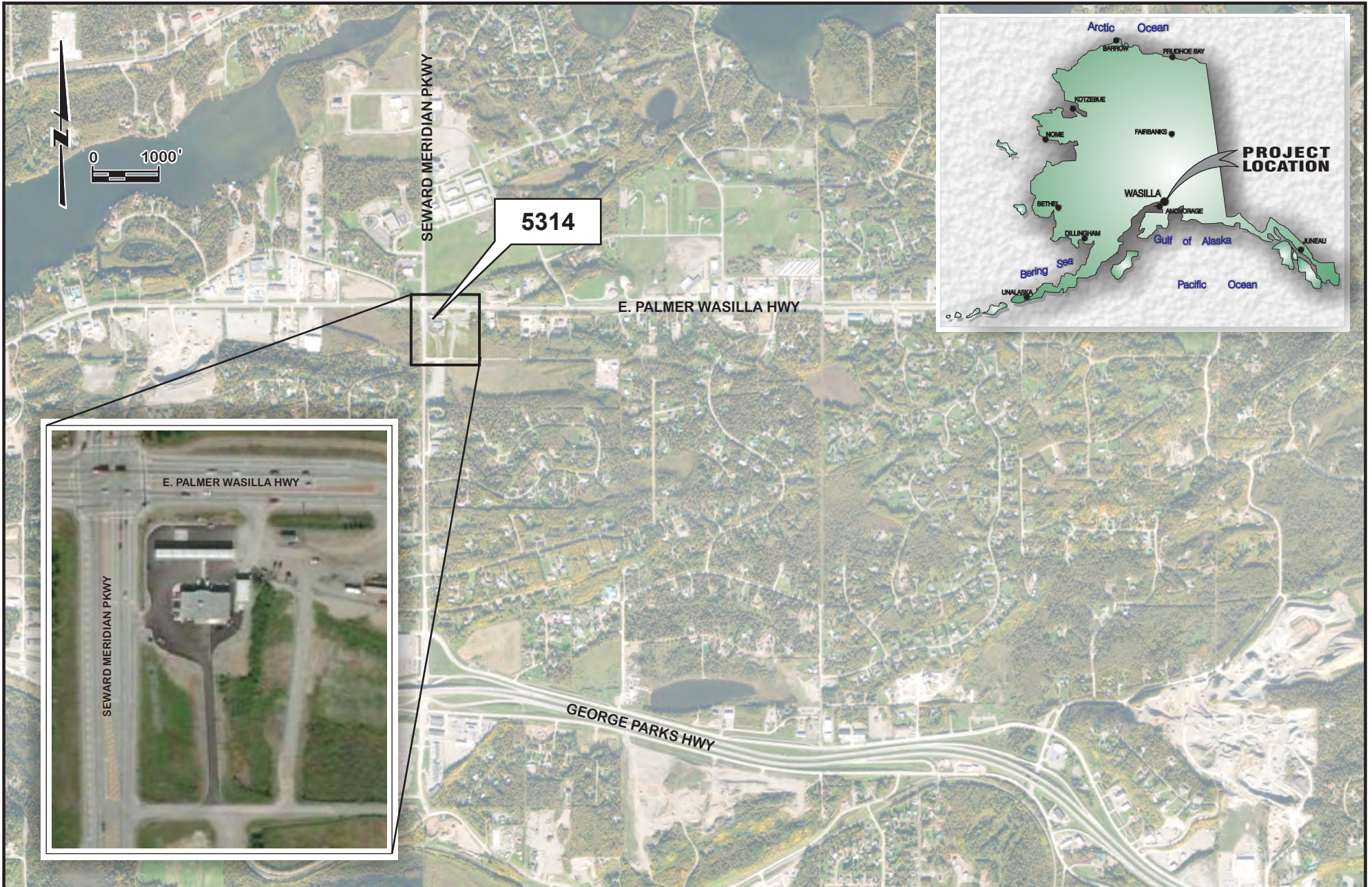
were completed in accordance with the ADEC *Underground Storage Tanks Procedures Manual – Standard Sampling Procedures* (March 22, 2017). The conclusions in this report are Stantec's professional opinion, as of the time of the report, and concerning the scope described in the report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not consider any subsequent changes. This report relates solely to the specific project for which Stantec was retained and the stated purpose for which the report was prepared.

This report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

In addition, this report is intended solely for use by the client in accordance with Stantec's contract with the client. While the report may be provided to applicable authorities having jurisdiction and others for whom the client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

FIGURES

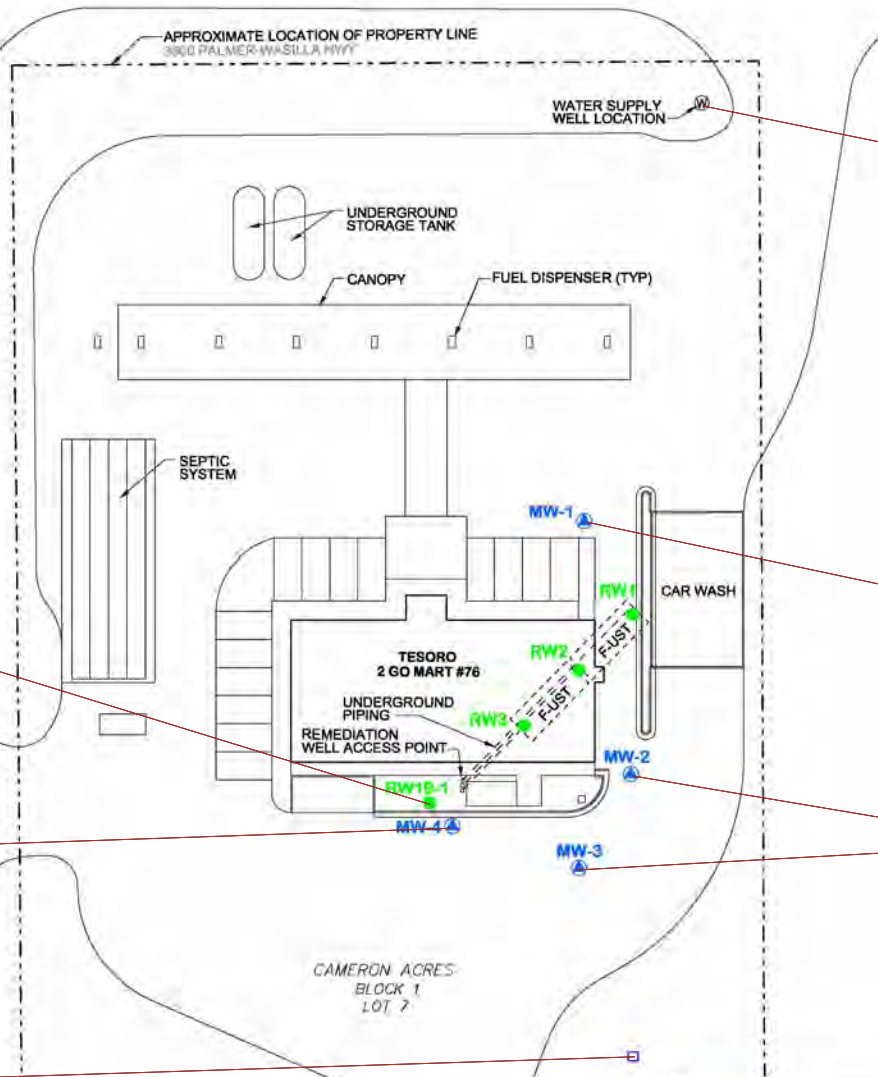
- Figure 1 Location and Vicinity Map
Figure 2 Site Plan with Analytical Results
Figure 3 Groundwater Elevation and Contours
-



E. PALMER WASILLA HWY



SITE DATA COMPARED TO ADEC Groundwater Cleanup Levels (GCLs)		124-TMB 0.056 mg/L	
ND	NOT DETECTED	135-TMB	0.06 mg/L
--	NOT SAMPLED	BENZENE	0.0046 mg/L
50	SAMPLED & UNDER GCL	DRO	1.5 mg/L
100	SAMPLED & OVER GCL	ETHYLBENZENE	0.015 mg/L
EP	FREE PRODUCT DISPLAYED IN mg/L	GRO	2.2 mg/L
		NAPHTHALENE	0.0017 mg/L
		SODIUM	
		TOLUENE	1.1 mg/L
		TOTAL XYLENES	0.19 mg/L



RW19-1 10/25/24

124-TMB	0.00743
135-TMB	0.00104
BENZENE	0.0833
DRO	U(0.840)
ETHYLBENZENE	0.0725
GRO	0.571
NAPHTHALENE	0.000662
SODIUM	87.6
TOLUENE	U(0.00100)
TOTAL XYLENES	0.12435

MW-4 10/25/24

124-TMB	0.0242
135-TMB	0.00581
BENZENE	0.0198
DRO	U(0.840)
ETHYLBENZENE	0.0164
GRO	0.412
NAPHTHALENE	0.00109
SODIUM	110
TOLUENE	0.002
TOTAL XYLENES	0.02925

Wetland 10/25/24

124-TMB	0.0261
135-TMB	0.0362
BENZENE	0.00476
DRO	0.223
ETHYLBENZENE	0.0117
GRO	0.454
NAPHTHALENE	0.000281
SODIUM	76.5
TOLUENE	U(0.00100)
TOTAL XYLENES	0.0308

Cameron-7 10/25/24

124-TMB	--
135-TMB	--
BENZENE	U(0.000500)
DRO	--
ETHYLBENZENE	U(0.000500)
GRO	--
NAPHTHALENE	--
SODIUM	--
TOLUENE	U(0.000500)
TOTAL XYLENES	U(0.000500)

MW-1 10/25/24

124-TMB	U(0.00100)
135-TMB	U(0.00100)
BENZENE	0.00265
DRO	U(0.840)
ETHYLBENZENE	U(0.00100)
GRO	0.0607
NAPHTHALENE	U(0.000250)
SODIUM	70.9
TOLUENE	U(0.00100)
TOTAL XYLENES	U(0.00300)

MW-2 10/25/24

124-TMB	U(0.00100)
135-TMB	U(0.00100)
BENZENE	0.0377
DRO	U(0.800)
ETHYLBENZENE	0.0141
GRO	0.368
NAPHTHALENE	0.00126
SODIUM	188
TOLUENE	0.00584
TOTAL XYLENES	0.00481

MW-3 10/25/24

124-TMB	0.00696
135-TMB	0.000345
BENZENE	0.031
DRO	0.593
ETHYLBENZENE	0.0907
GRO	0.517
NAPHTHALENE	0.00538
SODIUM	121
TOLUENE	0.000409
TOTAL XYLENES	0.06632

LEGEND:

- FORMER UNDERGROUND STORAGE TANK
- MONITORING WELL LOCATION
- REMEDIATION WELL LOCATION
- DRO** DIESEL RANGE ORGANICS
- GRO** GASOLINE RANGE ORGANICS
- GW Elev** GROUNDWATER ELEVATION IN FEET
- RW** REMEDIATION WELL
- TMB** TRIMETHYLBENZENE
- U** UNDETECTED ABOVE PRACTICAL QUANTITATION LIMITS SHOWN IN PARENTHESES
- DRINKING WATER WELL
- WETLANDS SAMPLING LOCATION

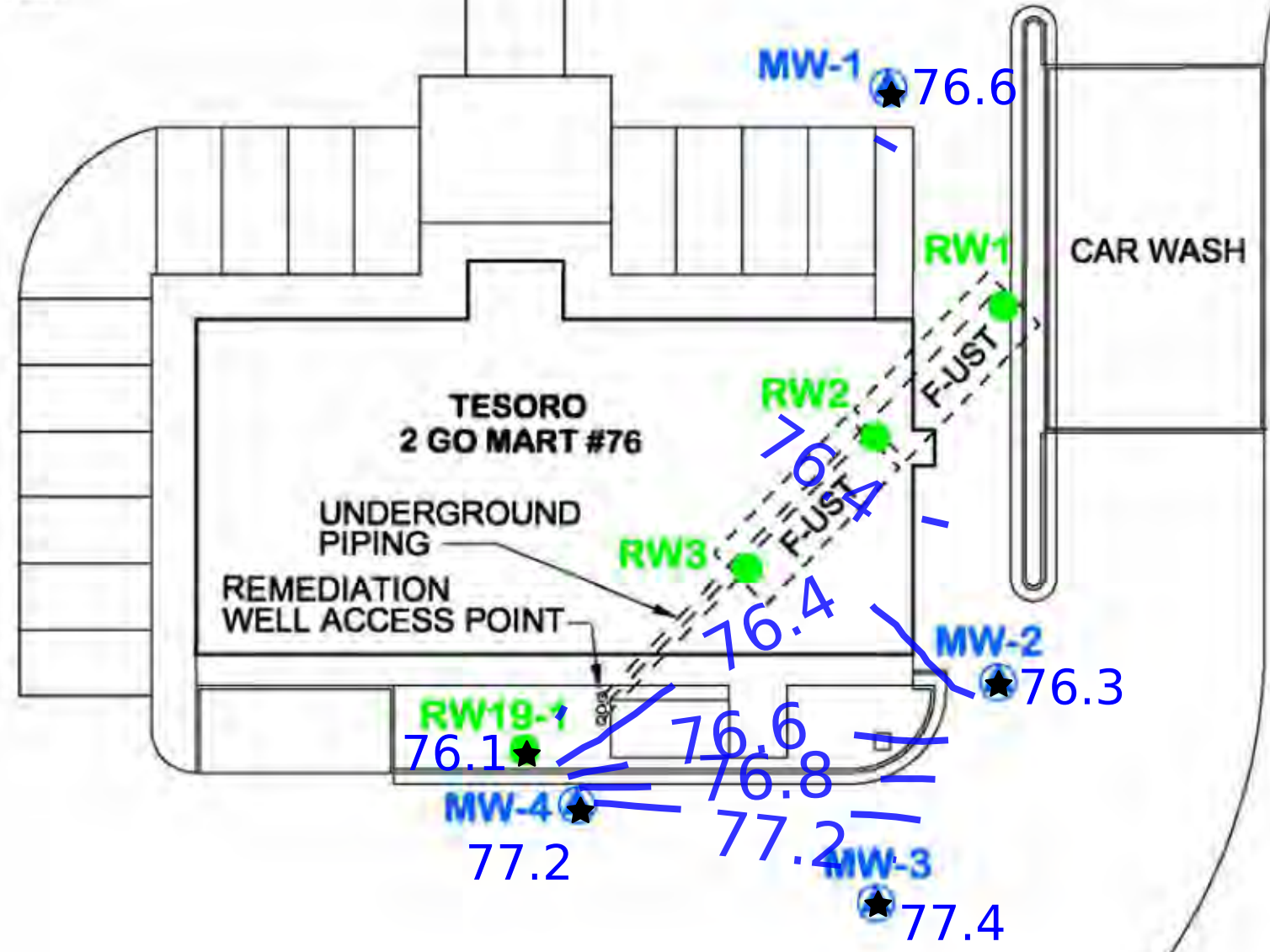
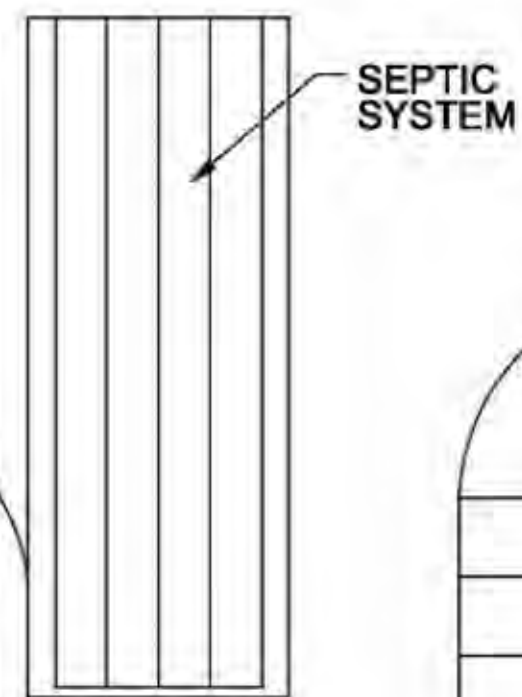
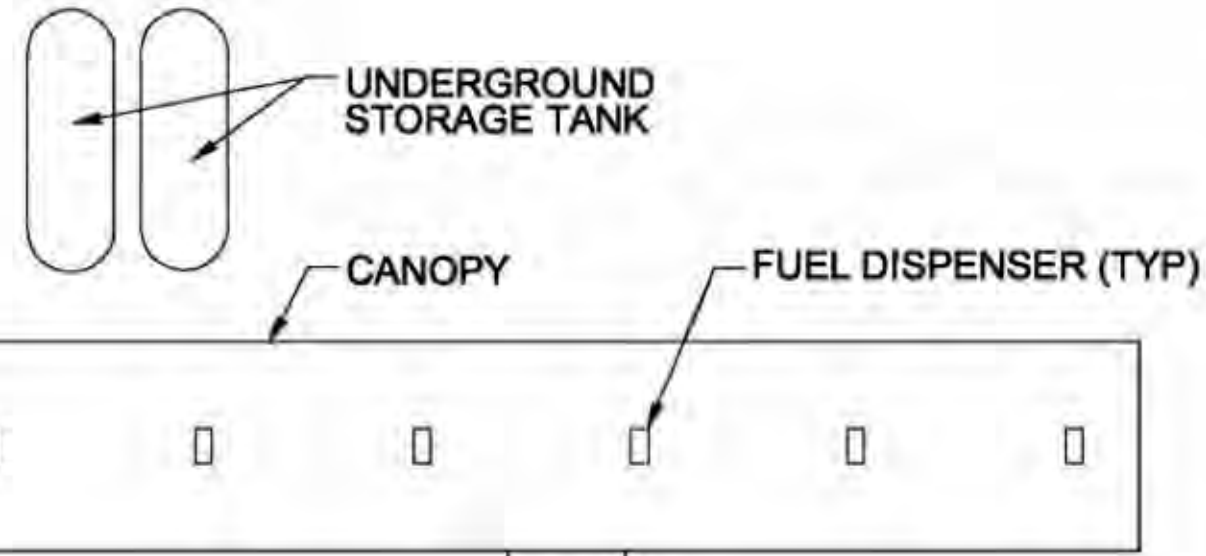


SEWARD MERIDIAN PKWY

E. PALMER WASILLA HWY

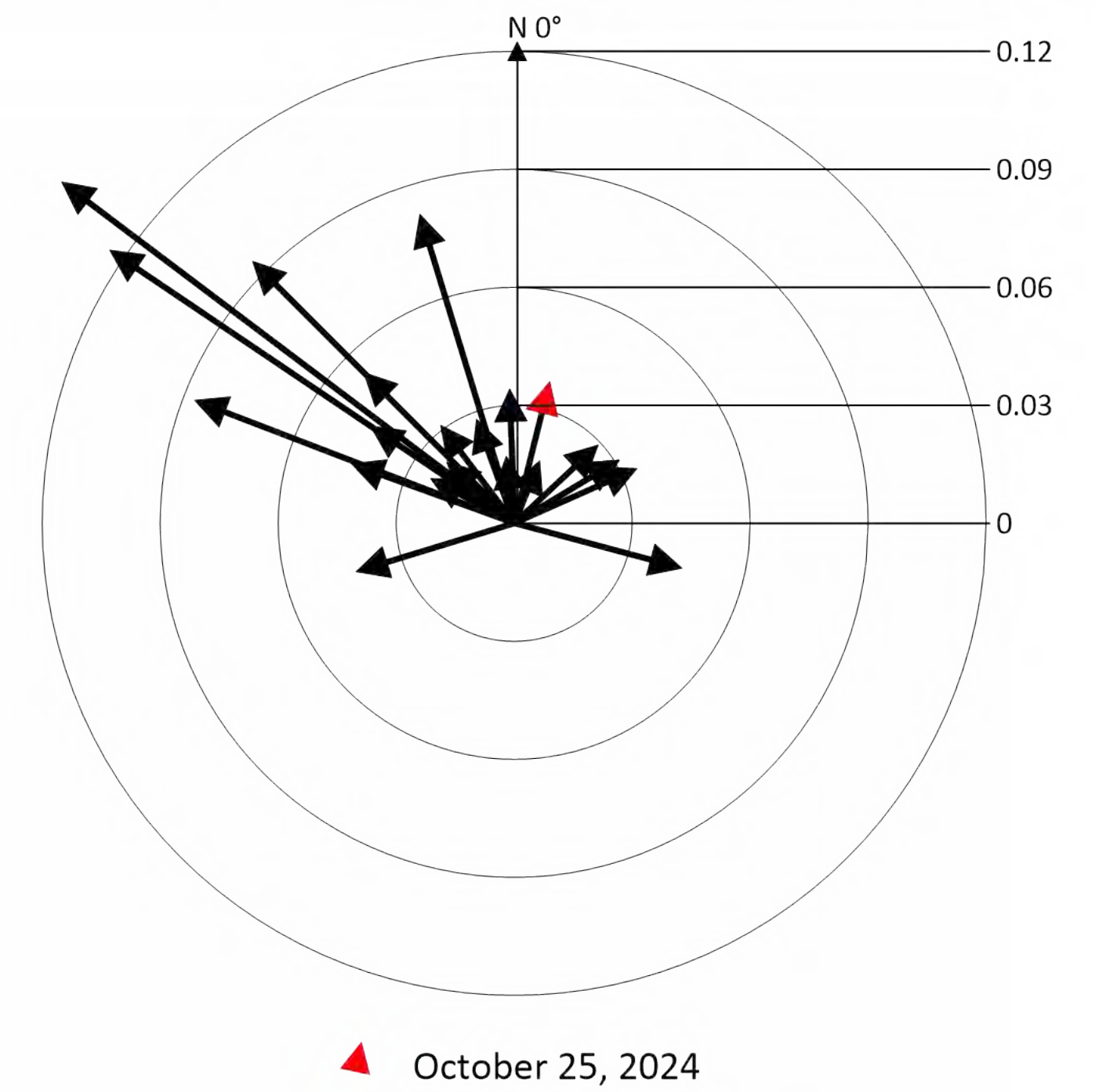
APPROXIMATE LOCATION OF PROPERTY LINE
3600 PALMER-WASILLA HWY

WATER SUPPLY WELL LOCATION



CAMERON ACRES
BLOCK 1
LOT 7

Groundwater Flow Direction (degrees azimuthal) and Gradient (ft/ft)



LEGEND:

- F-UST FORMER UNDERGROUND STORAGE TANK
- ▲ MONITORING WELL LOCATION
- REMEDIATION WELL LOCATION
- DRO DIESEL RANGE ORGANICS
- GRO GASOLINE RANGE ORGANICS
- GW Elev GROUNDWATER ELEVATION IN FEET
- RW REMEDIATION WELL
- TMB TRIMETHYLBENZENE
- U UNDETECTED ABOVE PRACTICAL QUANTITATION LIMITS SHOWN IN PARENTHESES
- W DRINKING WATER WELL



Speedway 5314
(7-Eleven 46745 - Former TNS 76)
Q4 GWM Event October 2024

**Groundwater Elevation
Contours**

APPENDIX A

Site Background

APPENDIX A – SITE BACKGROUND

Speedway Store 5314 (7-Eleven Store 46745 - Former TNS 76) located at 3600 Palmer-Wasilla Highway, Wasilla, Alaska
ADEC File #2265.26.037

Speedway Store 5314 (former Tesoro 2 Go Mart #76) is a retail fuel and convenience store facility located at 3600 Palmer-Wasilla Highway, Wasilla, Alaska (Figure 1). The legal description for the property is Lot 7, Block 1, Cameron Acres Subdivision, Matanuska-Susitna Borough.

Two 15,000-gallon underground storage tanks (USTs) were installed at the site in 1995. Based on historical records, this is the first retail fuel convenience store to occupy this location. The site is covered with asphalt paving with concrete in the area over the USTs and fuel dispenser islands. The former UST system and dispensing components were removed from September to October 2014 and replaced with a new UST fueling system. The new UST fueling system consists of two 15,000-gallon fiberglass-reinforced plastic, double-walled USTs installed on January 29, 2015, and seven fuel dispensers (six gasoline and one diesel). Distribution piping consists of 2-inch fiberglass primary and 3-inch fiberglass secondary.

In addition, the former convenience store was demolished and replaced with a new convenience store that was constructed at a different location on the property. The property is over 1 acre in size and is served with an on-site drinking water well and on-site septic tank and drainfield system.

October 2014. During the 2014 Site Assessment of the UST closure, a petroleum fuel release was discovered in the subsurface soils partially surrounding and underlying the USTs. At that time, a very deep test pit was excavated beneath the former USTs to the groundwater table. Field screening with a photoionization detector (PID) indicated that petroleum contamination was present throughout the vadose zone and extended to the underlying groundwater table. Due to site safety concerns with sloughing soils, it was not feasible to excavate all of the contaminated soil below the former USTs.

A Release Investigation (RI) was conducted by MWH Americas, Inc. (MWH) subsequent to the closure of the former USTs. The RI included the installation of a soil vapor extraction (SVE) remediation well and several groundwater monitoring wells. MWH completed a groundwater monitoring event after the monitoring wells were installed. Follow-up water samples were collected from the onsite drinking water well for appropriate laboratory analyses.

The findings of the RI indicated a significant amount of petroleum contamination had impacted the subsurface soils and shallow groundwater table at the site. The soil samples collected indicate higher concentrations of gasoline range organics (GRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX) constituents directly below the location occupied by the former USTs at Remediation Wells RW-2 and RW-3. Benzene was detected above Alaska Department of Environmental Conservation (ADEC) groundwater cleanup level (GCL) in groundwater at monitoring wells installed at the site. GRO contaminants have also impacted the groundwater table. The system has been monitored on a quarterly basis since the completion of the RI.

February 2015. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

June 2015. MWH installed and placed into operation a SVE system at the site. Early results indicate that the system is effectively removing petroleum-related vapors from the subsurface. Additionally, a surface water sample was collected from an on-site nearby wetland surface water area. Xylenes and DRO were detected in the water sample; however, the concentrations were below the ADEC groundwater and surface water cleanup levels.

September 2015. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The SVE remediation system blower was offline, requiring maintenance.

November 2015. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

December 2015. Maintenance was performed on the SVE system on December 31, 2015. A replacement SVE system blower was installed. The system was brought back online on the date of the replacement blower installation. A PID was used to monitor the system effluent after the initial 15 minutes of operation and indicated that 424 parts per million by volume were being removed by the system.

January 2016. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

May 2016 Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). An SVE effluent sample was collected to monitor SVE performance.

October 2016. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). An SVE effluent sample was collected to monitor SVE performance.

December 2016 Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

February 2017. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The SVE system was frozen due to record cold temperatures experienced during January 2017. A subsequent site visit on February 16, 2017, was made to thaw and restore the SVE system to normal operation.

April 2017. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). Pilot Testing (conducted in May 2017) of air injection into remediation wells to volatilize groundwater and smear zone contaminants indicated a slight increase of volatilization when air is injected into RW-2, and RW-3.

September 2017. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The SVE contaminant vapor mass removal was less than observed during pilot test in May 2017 and requires additional optimization.

February 2018. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The SVE contaminant vapor mass removal was less than previously observed on site. In addition, the field work included an assessment of the buried piping systems for the air sparging (AS) and SVE systems. The assessment was performed with a downhole camera capable of recording photographs and video of the interior conditions of the piping system. The findings of the downhole camera assessment of the buried piping system was inconclusive.

June 2018. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The SVE contaminant vapor mass removal is very low and based on the recent pattern of decline suggest that the SVE system performance requires additional optimization.

September 2018. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

October 2018. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

February 2019. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The existing bio-sparge treatment system is not functional and will be replaced. In the 2nd quarter of 2019, Stantec plans to install a groundwater recirculation system based on pump and treat technology. The SVE contaminant vapor mass removal is very low and, based on the recent pattern of decline, suggests that the SVE system performance requires additional optimization. Alternative treatment options are currently being evaluated and, if determine feasible, a new work plan will be presented to ADEC for review and approval prior to making any changes.

April 2019. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

July 2019. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

October 2019. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). Stantec plans to drill a new 4” diameter remediation well (RW 19-1) and repurpose the current bio-sparge system. The new well and bio-sparge system will be converted into a groundwater recirculation system to allow injection of chemical oxidation products. The implementation of this change in the remediation system will occur in the 2nd quarter of 2020.

August 2020. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). In 2019 Stantec installed a groundwater recirculation system based

on pump and treat technology. The 4” diameter remediation well (RW 19-1) that was installed in October 2019, is connected to the existing underground piping system (formerly used for the bio-sparg system) consisting of 3 vertical injection wells located under the northeast portion of the existing store building. Chemical oxidation injection of Klozur One® product directly into the 3 vertical injection wells was conducted during this monitoring event. A total of 330 pounds of Klozur One® and 750 gallons of water pumped from RW19-1 was injected into the in-situ groundwater treatment system.

October 2020. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On September 3, 2020 - prior to the 4th quarter groundwater monitoring event, Stantec completed an injection of chemox products.

March 2021. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The operation of the groundwater recirculation well (RW 19-1) was checked and noted to be operating within normal range. The submersible pump runs on a continuous basis and observed to discharge approximately a total flow rate of 1.5 gallons per minute into the three on-site injection wells (RW-1, RW-2 and RW-3) that are located within the “footprint” of the former underground storage tank (UST).

May 2021. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The operation of the groundwater recirculation well (RW 19-1) was checked and noted to be operating within normal range. The submersible pump runs on a continuous basis and observed to discharge approximately a total flow rate of 1 to 2 gallons per minute into the three on-site injection wells (RW-1, RW-2 and RW-3) that are located within the “footprint” of the former underground storage tank (UST). Chemox injection via the three remediation wells took place on May 19, 2021, during the completion of the groundwater monitoring event.

July 2021. Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On July 28, 2021, Stantec completed groundwater remediation event that included the injection of chemical oxidation (chemox) solution into the three treatment/remediation wells.

October 2021: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On October 1, 2021, Stantec completed groundwater remediation event that included the injection of chemox solution into the three treatment/remediation wells.

March 2022: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On March 25, 2022, Stantec completed groundwater remediation event that included the injection of chemical oxidation (chemox) solution into the three treatment/remediation wells.

June 2022: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). During the 2Q 2022, Stantec completed two groundwater remediation events that included the monthly injection of chemical oxidation (chemox) solution into the three treatment/remediation wells. The chemox was injected on May 16 and June 16, 2022.

August 2022: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). Flow from RW 19-1 was discharged at approximately 1 gpm on a continuous basis into injection well RW-2 located in the footprint of the former UST. Between June 23 and July 20 of this year, the pump was turned off to protect the pump during low groundwater elevation conditions due to low rainfall in the early to mid-summer.

October 2022: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On October 6, Stantec staff pulled the pump and cleaned it and the drop tube, and purged the well to clean iron flocculant off the screen. The submersible pump in the recirculation well has since been operating on a continuous basis (24 hours each day). On October 6, 2022, Stantec completed groundwater remediation event that included the injection of chemox solution into the three treatment/remediation wells.

March 2023: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On March 28, 2023, Stantec completed a groundwater remediation event that included the injection of chemox solution into the three treatment/remediation wells. It was noted that the chemox solution was accepted less readily in wells RW-1 and RW-2 than in the past. Following the chemox event, water from the recirculation well was directed into RW-1.

April 2023: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

July 2023: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). On July 14, 2023, Stantec completed a groundwater remediation event that included the injection of chemox solution into the three treatment/remediation wells.

October 2023: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

March 2024: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data).

June 2024: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). A grab sample was collected from ponded surface water associated with a wetland (see Figure 2 for location). This sample was collected to determine if subsurface contamination or runoff are impacting the wetlands to the south of the store in a depression approximately 15-feet below the ground surface of the store. The wetland sample had concentrations of benzene, ethylbenzene and 1,2,4 TMB that exceeded the ADEC GCLs. During last week of October 2024, Stantec plans to return to the site to re-sample the wetland (surface water) and test the sample for the same contaminants as shown herein on Table 3. The purpose of the resample is to confirm the finding of contamination and address the issue if contamination is verified with a remedial approach that will be provided in the corrective action work plan for 2025 that will be discussed during the annual work session with 7-Eleven, ADEC and Stantec.

October 2024: Completed GWM event and laboratory test results are provided in Appendix D (Historical Monitoring Data). The wetland sample confirmed concentrations of benzene above GCLs. The pump in well RW19-1 was found to be inoperable; repair is scheduled for 2025.

APPENDIX B

Field Methods & Procedures

APPENDIX B – FIELD METHODS AND PROCEDURES

Speedway Store 5314 (7-Eleven Store 46745 - Former TNS 76) located at 3600 Palmer-Wasilla Highway, Fairbanks, Alaska

Lot 7, Block 1, Cameron Acres Subdivision, Matanuska-Susitna Borough

ADEC File #2265.26.037

The following table presents the proposed tasks for the Alaska Department of Environmental Conservation (ADEC)-approved 2024 Corrective Action Plan (CAP). The scope of these tasks is based on the results and findings of the monitoring and remediation completed to date at the site.

2024 Work Plan Schedule Speedway Store 5314

Work Plan Task		1 st Quarter	2 nd Quarter	3 rd Quarter	4 th Quarter
Task 1	Monitoring Wells: MW-1, MW-2, MW-3, and MW-4 including Remediation/Recirculation Well RW19-1	V, G, D, P, S & I	V, G, D, P, S & I	V, G, D, P, S & I	V, G, D, P, S & I
	On-site Domestic Drinking Water Well				D & E
Task 2	O&M Recirculation Groundwater Treatment System	✓	✓	✓	✓
Task 3	Chemical Oxidation Treatment	✓	✓	✓	✓

Key:

AK – Alaska Test Method

D – Diesel range organics by AK102.

EPA – U.S. Environmental Protection Agency

E – Drinking Water parameters by EPA Test Method 524.2.

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

V – Volatile organic compounds by EPA Test Method 8260C.

S – Sodium analyzed by Metals (ICP) Method 6010C.

P - Polynuclear aromatic hydrocarbons (PAHs), i.e., semi-volatile organic compounds, by EPA Test Method 8270D Selective Ion Monitoring (SIM).

The CAP for the year 2024 will be implemented by Stantec on behalf of Speedway. Groundwater monitoring will be conducted to track migration and trends of contaminants that are present at the site. All sampling activities will be completed in accordance with ADEC’s *Underground Storage Tanks Procedures Manual– Standard Sampling Procedures* (March 22, 2017). The

methods that will be used for conducting a monitoring event, unless otherwise noted in the monitoring report, will include:

- The static water levels in the monitoring wells will be measured with respect to the top of each well casing. The elevation of the static water level will be based on an arbitrary datum established on-site during a vertical control survey that will be completed by Stantec on an annual basis. The survey will be performed during the summer after the seasonal frost layer thaws.
- The monitoring wells will be purged of a minimum of three well bore volumes prior to collecting the water samples. A new, disposable, Teflon[®] bailer will be used to sample each well. The first bail of water removed from each well will be examined for petroleum odor, sheen, and any other unique physical features.
- Water 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 2024 Schedule shown above.

APPENDIX C

Field Measurements & Notes

Site Name: TNS #76

Date: 10/25/2024,
9:25 AM

Name(s): Sydney
Souza



Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
MW-1	61.5845298133	-149.358577633
Field Intrinsic		
Sampler Names: Sydney	Sheen/Odor?:	
pH: 6.45	Specific Conductance: 1661	
DO: 1.15	Temperature (C): 6.0	
ORP: 1538.	Purge Volume (gal): 4	
Notes:		



Site Name: TNS #76

Date: 10/25/2024,
9:26 AM

Name(s): Sydney
Souza



Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
MW-2	61.5843106137	-149.358489851
Field Intrinsic		
Sampler Names: Sydney Remi		Sheen/Odor?: None
pH: 6.00		Specific Conductance: 1876
DO: 2.35		Temperature (C): 6.9
ORP: 175.7		Purge Volume (gal): 4
Notes:		



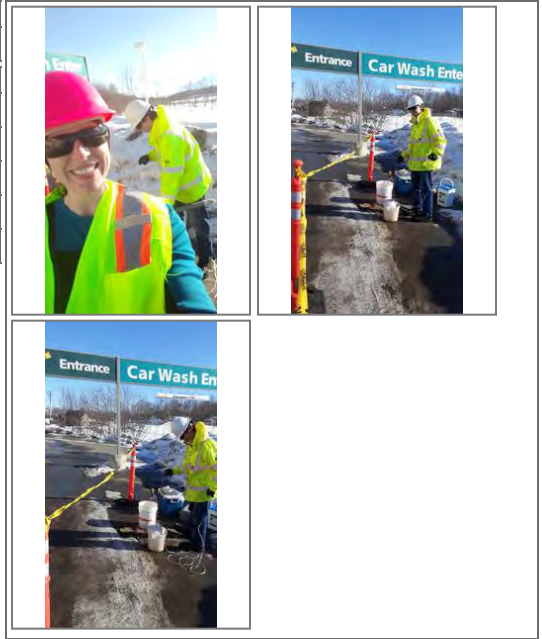
Site Name: TNS #76

Date: 10/25/2024,
9:25 AM

Name(s): Sydney
Souza



Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
MW-3	61.5842287396	-149.358589014
Field Intrinsic		
Sampler Names: Sydney remi	Sheen/Odor?: None	
pH: 6.22	Specific Conductance: 1439	
DO: 1.89	Temperature (C): 6.4	
ORP: 218.7	Purge Volume (gal): 3	
Notes:		





Site Name: TNS #76

Date: 10/25/2024,
9:25 AM

Name(s): Sydney
Souza

Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
MW-4	61.5842637859	-149.358822557
Field Intrinsic		
Sampler Names: Remi	Sheen/Odor?: Odor	
pH: 6.57	Specific Conductance: 1214	
DO: 1.32	Temperature (C): 6.3	
ORP: 162.3	Purge Volume (gal): 5	
Notes: Dark orange		



Site Name: TNS #76Date: 10/25/2024,
9:27 AMName(s): Sydney
Souza

Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
RW19-1	61.5843002	-149.3588681
Field Intrinsic		
Sampler Names: Sydney Remi		Sheen/Odor?:
pH: 6.19		Specific Conductance: 1514
DO: 2.33		Temperature (C): 6.6
ORP: 185.4		Purge Volume (gal): 5
Notes:		

Site Name: TNS #76

Date: 10/25/2024
9:24 AM

Name(s): Sydney
Souza



Location ID	GPS Latitude (decimal)	GPS Longitude (decimal)
Wetland		
Field Intrinsic		
Sampler Names: Sydney Remi	Sheen/Odor?: Bio sheen	
pH: 6.32	Specific Conductance: 1202	
DO: 1.78	Temperature (C): 0.3	
ORP: 198.3	Purge Volume (gal):	
Notes: Surface water		



APPENDIX D

Historical Monitoring Data

TNS #76
 7-Eleven - Paula Sime
 3600 E. Palmer Wasilla Highway
 Wasilla, Alaska 99654

Data Table

	Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Sodium	Toluene	Total Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017		1.1	0.19
Cameron-7												
05/09/2016	--	--	—	—	U	U	U	—	—	—	U	U
10/13/2016	--	--	—	—	U	U	U	—	—	—	U	U
12/09/2016	--	--	—	—	U	U	U	—	—	—	U	U
06/29/2018	--	--	—	—	U	U	U	—	—	—	U	U
04/25/2019	--	--	—	—	U	U(0.26)	U	—	—	—	U	U
10/12/2020	--	--	—	—	U(0.000500)	U(0.186)	U(0.000500)	—	—	U(0.000100)	U(0.000500)	U(0.000500)
10/14/2021	--	--	—	—	U (0.0005)	0.37	U (0.0005)	—	—	U (0.001)	U (0.0005)	U (0.0005)
10/05/2022	--	--	—	—	U(0.000500)	—	U(0.000500)	—	—	U(0.000500)	U(0.000500)	U(0.000500)
11/03/2023	--	--	—	—	U(0.000500)	0.532	U(0.000500)	—	—	U(0.000500)	U(0.000500)	U(0.000500)
10/25/2024	--	--	—	—	U(0.000500)	—	U(0.000500)	—	—	U(0.000500)	U(0.000500)	U(0.000500)
MW-1												
11/06/2014	--	--	—	—	0.0270	0.36	U (0.0005)	0.0670	—	—	U (0.0005)	U (0.0015)
02/25/2015	--	--	—	—	0.001300	U (0.41)	U (0.0005)	U (0.05)	—	—	U (0.0005)	U (0.0015)
06/10/2015	--	--	—	—	U (0.002)	0.50	U (0.003)	U (0.060)	—	—	U (0.002)	U (0.002)
09/02/2015	--	--	—	—	0.001100	U (0.40)	U (0.001)	U (0.1)	—	—	U (0.001)	U (0.003)
11/12/2015	--	--	—	—	0.0290	U (0.21)	U (0.003)	0.14	—	—	U (0.002)	U (0.002)
01/20/2016	--	--	—	—	0.0710	0.22	U (0.003)	0.18	—	—	U (0.002)	U (0.002)
05/09/2016	--	--	—	—	0.0260	U (0.45)	U (0.001)	0.10	—	—	U (0.001)	U (0.003)
10/13/2016	--	--	—	—	0.0530	0.36	U (0.001)	0.84	—	—	U (0.001)	U (0.003)
12/09/2016	--	--	—	—	0.0270	0.67	U (0.002)	0.0670	—	—	U (0.002)	U (0.003)
02/08/2017	--	--	—	—	0.0100	0.27	U (0.003)	0.0570	—	—	U (0.002)	U (0.002)
04/24/2017	--	--	—	—	0.009600	U (0.0003)	U (0.003)	U (0.001)	—	—	U (0.002)	U (0.003)
09/01/2017	--	--	—	—	0.006800	0.25	U (0.003)	U (1.0)	—	—	U (0.002)	U (0.002)
02/15/2018	--	--	—	—	0.0120	U (0.13)	U (0.003)	U (1.0)	—	—	U (0.002)	U (0.003)
06/29/2018	--	--	—	—	0.0260	0.30	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)
09/11/2018	--	--	—	—	0.0100	U (0.27)	U (0.001)	U (0.15)	—	—	U (0.001)	U (0.002)
10/26/2018	--	--	—	—	0.0150	0.31	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)
02/25/2019	--	--	—	—	0.003700	0.19	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)
04/25/2019	--	--	—	—	U (0.003)	U (0.27)	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)
07/25/2019	--	--	—	—	0.007100	0.27	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)

		Well Screen Interval	Ground Water Elevation	1,2,4-TMB	1,3,5-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Sodium	Toluene	Total Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017			1.1	0.19
10/18/2019	--	--	—	—	U (0.003)	0.16	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)	
08/11/2020	--	73.27	—	—	0.0026200	U (0.808)	U (0.001)	U (0.1)	—	35.8	U (0.001)	U (0.003)	
10/12/2020	--	72.88	U (0.001)	U (0.001)	0.0054800	0.369	U (0.001)	0.0110	U (0.000250)	43.6	U (0.001)	U (0.002)	
03/23/2021	--	73.38	—	—	0.000526000	U (0.840)	U (0.001)	0.0130	—	33.2	U (0.001)	U (0.001)	
05/19/2021	--	73.17	U (0.00100)	U (0.00100)	0.0048100	U (0.840)	U (0.001)	0.03020	U (0.00500)	35.0	U (0.001)	U (0.002)	
07/14/2021	--	72.93	U (0.00100)	U (0.00100)	0.0017700	0.317	U (0.001)	U (0.1)	U (0.00500)	32.2	U (0.001)	U (0.003)	
10/14/2021	--	75.24	U (0.00100)	U (0.00100)	0.01670	0.427	U (0.001)	0.06690	U (0.000250)	59.7	U (0.001)	U (0.002)	
03/17/2022	--	75.93	U (0.00100)	U (0.00100)	0.000111000	0.263	U (0.00100)	U (0.100)	U (0.000250)	133	U (0.00100)	U (0.00300)	
06/22/2022	--	73.67	U (0.00100)	U (0.00100)	0.0097500	U (0.800)	U (0.00100)	0.03750	U (0.000250)	49.2	U (0.00100)	U (0.00300)	
08/19/2022	--	75.72	U (0.00100)	0.000106000	0.0060600	U (0.800)	U (0.00100)	0.05090	U (0.000250)	85.3	U (0.00100)	0.000456000	
10/05/2022	--	--	U (0.00100)	U (0.00100)	0.04770	U (0.800)	U (0.00100)	0.08130	U (0.000250)	54.8	U (0.00100)	U (0.00300)	
03/09/2023	--	75.05	U (0.00100)	U (0.00100)	0.0022400	0.281 J,B	0.000167 J	0.0303 J	U (0.000250)	55.4	U (0.00100)	U (0.00300)	
04/26/2023	--	76.74	—	—	0.0680	0.334	0.000237000	0.178	U (0.00025)	70.6	U (0.00100)	0.0031300	
07/13/2023	--	79.30	U (0.00100)	U (0.00100)	0.01030	0.341	U (0.00100)	0.06110	U (0.000250)	90.3	U (0.00100)	U (0.00100)	
11/03/2023	--	76.62	U (0.00100)	U (0.00100)	0.0043400	0.508	U (0.00100)	0.04730	U (0.000250)	154	U (0.00100)	U (0.00300)	
03/21/2024	--	76.20	U (0.00100)	U (0.00100)	0.0019400	U (0.800)	U (0.00100)	0.125	U (0.000250)	107	U (0.00100)	U (0.00100)	
06/17/2024	--	75.49	U (0.00100)	U (0.00100)	0.0120	U (0.800)	U (0.00100)	U (0.100)	U (0.000250)	76.7	U (0.00100)	U (0.00300)	
08/28/2024	--	75.45	U (0.00100)	U (0.00100)	0.0046300	0.323	U (0.00100)	0.06240	U (0.000250)	70.1	U (0.00100)	U (0.00100)	
10/25/2024	--	76.63	U (0.00100)	U (0.00100)	0.0026500	U (0.840)	U (0.00100)	0.06070	U (0.000250)	70.9	U (0.00100)	U (0.00300)	
MW-2													
11/06/2014	--	--	—	—	0.0670	0.19	0.0160	0.68	—	—	0.0260	0.13	
02/25/2015	--	--	—	—	0.0220	U (0.41)	0.003400	0.13	—	—	0.004500	0.0200	
06/10/2015	--	--	—	—	U (0.002)	1.10	U (0.003)	6.10	—	—	U (0.002)	1.82	
09/02/2015	--	--	—	—	0.0890	1.80	0.0650	U (10)	—	—	0.0560	1.40	
11/12/2015	--	--	—	—	0.0910	1.80	0.13	22.0	—	—	0.11	0.179	
01/20/2016	--	--	—	—	0.52	1.60	0.83	—	—	—	1.50	5.10	
05/09/2016	--	--	—	—	0.41	0.95	0.35	U (10)	—	—	0.37	2.80	
10/13/2016	--	--	—	—	0.42	0.98	0.48	9.20	—	—	0.63	2.62	
12/09/2016	--	--	—	—	0.57	1.70	0.50	11.0	—	—	0.17	1.01	
02/08/2017	--	--	—	—	0.0530	0.20	0.0210	0.58	—	—	U (0.002)	0.0960	
04/24/2017	--	--	—	—	0.0360	0.94	0.0350	2.60	—	—	0.0120	0.66	
09/01/2017	--	--	—	—	0.0830	1.30	0.45	9.70	—	—	0.0260	2.33	
02/15/2018	--	--	—	—	0.0670	0.98	0.14	U (10)	—	—	0.0200	0.97	
06/29/2018	--	--	—	—	0.17	1.20	0.59	6.00	—	—	0.25	3.30	
09/11/2018	--	--	—	—	0.0940	0.74	0.18	4.80	—	—	0.13	1.08	
10/26/2018	--	--	—	—	0.17	1.00	0.48	11.0	—	—	0.28	3.01	
02/25/2019	--	--	—	—	0.0920	1.20	0.18	5.40	—	—	0.22	1.41	
04/25/2019	--	--	—	—	0.0510	0.93	U (0.003)	3.60	—	—	0.13	1.28	
07/25/2019	--	--	—	—	0.0790	0.89	0.20	5.40	—	—	0.13	1.47	

		Well Screen Interval	Ground Water Elevation	1,2,4-TMB	1,3,5-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Sodium	Toluene	Total Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017		1.1	0.19	
10/18/2019	--	--	—	—	0.0250	0.24	0.0220	0.74	—	—	0.006500	0.101	
08/11/2020	--	74.49	—	—	0.05990	0.553	0.07590	0.921	—	33.2	0.01070	0.465	
10/12/2020	--	74.58	0.109	0.03290	0.16	0.409	0.04550	0.755	0.000405000	55.2	U (0.001)	0.168	
03/23/2021	--	73.53	—	—	0.0054200	U (0.840)	U (0.001)	0.02270	—	48.1	U (0.001)	U (0.003)	
05/19/2021	--	73.57	0.0027800	0.001200	0.0033800	U (0.840)	0.000461000	0.03740	U(0.00500)	25.4	U (0.001)	0.0050100	
07/14/2021	--	73.97	0.0048700	0.0010700	0.0039900	0.272	0.0019300	0.05040	U (0.00500)	32.8	U (0.001)	0.0046500	
10/14/2021	--	76.78	0.07060	0.01850	0.02920	0.589	0.01760	0.628	0.000277000	50.3	0.01090	0.1308	
03/17/2022	--	76.98	0.01130	0.0033500	0.01890	0.288	0.0072300	0.249	U(0.000250)	180	0.000395000	0.023130	
06/22/2022	--	74.73	U(0.00100)	U(0.00100)	0.02030	0.38	0.0058300	0.327	U(0.000250)	87.7	0.0056700	0.0045400	
08/19/2022	--	77.77	U(0.00100)	U(0.00100)	0.0230	0.198	0.0064100	0.137	U(0.000250)	86.3	0.0017100	0.0077500	
10/05/2022	--	--	0.0090700	0.0030400	0.0078100	U(0.800)	0.0044600	0.117	U(0.000250)	37.3	0.000291000	0.01050	
03/09/2023	--	76.66	0.02990	0.0087900	0.05930	0.451 J,B	0.01770	0.375	0.0011400	36.7	0.000918 J	0.038850	
04/26/2023	--	77.75	—	—	0.01230	0.318	0.0027300	0.128	0.000109000	51.4	0.000342000	0.01020	
07/13/2023	--	77.36	0.0220	0.0066100	0.01290	0.349	0.005300	0.343	0.000347000	61.2	U(0.00100)	0.0020100	
11/03/2023	--	77.65	0.0033700	0.00098000	0.004400	0.695	0.0029900	0.08240	U(0.000250)	37.1	U(0.00100)	0.010580	
03/21/2024	--	77.23	0.01080	0.0033400	0.04420	U(0.800)	0.01820	0.34	0.000217000	111	U(0.00100)	0.00100	
06/17/2024	--	77.00	U(0.00100)	U(0.00100)	0.05650	0.278	0.0089400	0.08630	0.0003000	167	0.0035700	0.000943000	
08/28/2024	--	77.12	0.0039600	0.00074000	0.01590	0.457	0.0078700	0.27	U(0.000250)	60.7	U(0.00100)	0.011520	
10/25/2024	--	76.32	U(0.00100)	U(0.00100)	0.03770	U(0.800)	0.01410	0.368	0.0012600	188	0.0058400	0.0048100	
MW-3													
11/06/2014	--	--	—	—	5.00	3.50	37.0	240	—	—	7.40	39.0	
02/25/2015	--	--	—	—	2.90	8.60	6.70	180	—	—	34.0	37.0	
06/10/2015	--	--	—	—	5.20	9.50	8.20	210	—	—	38.0	48.0	
09/02/2015	--	--	—	—	3.70	5.10	4.40	U (200)	—	—	24.0	28.0	
11/12/2015	--	--	—	—	1.30	3.60	0.21	87.0	—	—	2.10	1.69	
01/20/2016	--	--	—	—	3.80	4.10	4.20	120	—	—	13.0	25.3	
05/09/2016	--	--	—	—	2.10	1.50	2.20	69.0	—	—	21.0	33.0	
10/13/2016	--	--	—	—	1.20	2.00	2.90	46.0	—	—	4.20	14.6	
12/09/2016	--	--	—	—	0.17	3.30	—	100	—	—	—	0.54	
02/08/2017	--	--	—	—	39.0	3.90	53.0	98.0	—	—	99.0	103	
04/24/2017	--	--	—	—	2.50	6.70	5.20	U (200)	—	—	14.0	28.9	
09/01/2017	--	--	—	—	0.61	1.90	3.70	75.0	—	—	9.30	21.4	
02/15/2018	--	--	—	—	0.30	1.30	2.90	U (100)	—	—	3.80	15.6	
06/29/2018	--	--	—	—	0.28	1.10	1.70	23.0	—	—	1.10	8.20	
09/11/2018	--	--	—	—	0.29	0.91	1.00	14.0	—	—	0.53	5.60	
10/26/2018	--	--	—	—	0.32	0.93	0.89	15.0	—	—	0.36	4.30	
02/25/2019	--	--	—	—	0.95	4.60	2.30	U (1.3)	—	—	0.69	11.4	
04/25/2019	--	--	—	—	0.14	0.64	U (1.5)	11.0	—	—	0.13	U (1.5)	
07/25/2019	--	--	—	—	0.68	1.90	2.40	41.0	—	—	1.20	11.6	

	Well Screen Interval	Ground Water Elevation	124-TMB	135-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Sodium	Toluene	Total Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017		1.1	0.19
10/18/2019	--	--	—	—	0.21	1.20	1.70	21.0	—	—	0.66	9.70
08/11/2020	--	75.60	—	—	0.737	4.89	2.99	32.8	—	52.4	1.05	17.0
10/12/2020	--	76.20	2.91	0.764	0.32	5.22	2.46	29.4	0.04890	66.1	0.868	14.89
03/23/2021	--	75.12	—	—	0.45	U (0.840)	3.73	54.3	—	U(3.00)	1.21	21.6
05/19/2021	--	76.08	2.24	0.631	0.473	5.08	2.04	31.1	U(1.00)	47.0	0.186	11.1
07/14/2021	--	75.93	2.16	0.594	0.581	3.87	2.65	30.3	U (1.00)	49.8	0.156	12.87
10/14/2021	--	77.13	1.31	0.33	0.0840	2.11	0.741	15.8	0.01090	41.2	0.13	4.147
03/17/2022	--	76.99	1.49	0.46	0.06420	3.44	0.07640	13.9	0.02380	110	0.01040	4.351
06/22/2022	--	77.52	1.90	0.62	0.09230	3.24	0.739	10.2	0.02620	74.8	0.03360	3.776
08/19/2022	--	77.96	0.0280	0.0070700	0.01190	1.49	0.01060	0.559	0.0031500	68.9	U(0.00500)	0.2237
10/05/2022	--	--	0.343	0.09250	0.0200	0.92	0.168	2.83	0.004200	56.0	0.000379000	0.618
03/09/2023	--	76.79	1.35	0.339	0.153	2.10 B	0.959	10.3	0.02740	55.6	0.03320	4.512
04/26/2023	--	77.80	—	—	0.02410	2.16	0.09520	1.24	0.0028400	53.3	U(0.0100)	0.375
07/13/2023	--	77.39	0.06380	0.0190	0.009900	1.14	0.0670	1.10	0.000881000	60.0	0.0015900	0.05580
11/03/2023	--	77.63	0.0270	0.0082100	0.0039800	1.12	0.02920	0.389	0.000631000	45.5	0.000497000	0.1068
03/21/2024	--	77.19	0.911	0.271	0.102	0.922	0.511	7.64	0.01360	63.2	0.01280	0.254
06/17/2024	--	77.25	0.07640	0.01270	0.07120	1.15	0.218	1.53	0.0077500	101	U(0.0100)	0.305
08/28/2024	--	77.31	0.06440	0.02360	0.01760	0.639	0.07150	0.832	0.0012300	64.9	U(0.0100)	0.17335
10/25/2024	--	77.42	0.0069600	0.000345000	0.0310	0.593	0.09070	0.517	0.0053800	121	0.000409000	0.066320
MW-4												
11/06/2014	--	--	—	—	0.94	0.45	0.30	13.0	—	—	1.90	1.50
02/25/2015	--	--	—	—	3.70	1.00	0.56	29.0	—	—	6.60	2.70
06/10/2015	--	--	—	—	1.10	0.99	0.54	14.0	—	—	2.30	2.70
09/02/2015	--	--	—	—	0.0260	U (0.40)	0.00700	0.30	—	—	U (0.001)	0.0300
11/12/2015	--	--	—	—	—	U (0.21)	—	U (0.050)	—	—	—	—
01/20/2016	--	--	—	—	0.004300	0.15	U (0.003)	—	—	—	U (0.002)	U (0.002)
05/09/2016	--	--	—	—	0.009200	U (0.42)	U (0.001)	U (0.1)	—	—	U (0.001)	U (0.003)
10/13/2016	--	--	—	—	U (0.00020)	0.18	U (0.001)	U (0.1)	—	—	U (0.001)	U (0.003)
12/09/2016	--	--	—	—	—	0.18	—	U (0.05)	—	—	—	—
02/08/2017	--	--	—	—	0.0170	0.18	U (0.003)	U (0.05)	—	—	U (0.002)	U (0.002)
04/24/2017	--	--	—	—	0.0120	U (0.0003)	0.004900	U (0.001)	—	—	U (0.002)	U (0.003)
09/01/2017	--	--	—	—	0.55	0.48	0.38	5.10	—	—	U (0.050)	0.74
02/15/2018	--	--	—	—	0.19	0.29	0.26	3.30	—	—	U (0.10)	0.438
06/29/2018	--	--	—	—	0.0900	0.19	0.0220	0.52	—	—	U (0.002)	0.0270
09/11/2018	--	--	—	—	0.008600	U (0.28)	0.005200	U (0.15)	—	—	U (0.001)	0.006200
10/26/2018	--	--	—	—	0.0130	0.15	0.004500	U (0.25)	—	—	U (0.002)	0.008900
02/25/2019	--	--	—	—	0.0260	0.20	0.003400	U (0.25)	—	—	U (0.002)	0.008900
04/25/2019	--	--	—	—	U (0.003)	U (0.27)	U (0.003)	U (0.25)	—	—	U (0.002)	U (0.003)
07/25/2019	--	--	—	—	0.0510	0.16	U (0.003)	U (0.25)	—	—	U (0.002)	0.007800

	Well Screen Interval	Ground Water Elevation	1,2,4-TMB	1,3,5-TMB	Benzene	DRO	Ethylbenzene	GRO	Naphthalene	Sodium	Toluene	Total Xylenes
Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017		1.1	0.19
10/18/2019	--	--	—	—	0.0200	U (0.12)	0.005900	U (0.25)	—	—	0.0150	0.02770
08/11/2020	--	75.74	—	—	0.0540	U (0.800)	0.000455000	0.0840	—	58.4	U (0.001)	0.0093300
10/12/2020	--	76.05	0.01120	0.0017400	0.129	U (0.800)	0.0069900	0.313	0.000465000	36.2	U (0.001)	0.02640
03/23/2021	--	73.83	—	—	0.0790	0.266	0.01780	0.274	—	47.1	U (0.001)	0.03450
05/19/2021	--	75.89	0.01710	0.0042300	0.03070	U (0.840)	0.0032800	0.153	U(0.00500)	67.5	U (0.001)	0.01230
07/14/2021	--	75.81	0.0037400	0.000529000	0.01760	0.371	0.000375000	0.06820	U (0.00500)	76.7	U (0.001)	0.0038300
10/14/2021	--	75.05	0.0056100	0.000233000	0.0056400	0.521	0.0031800	0.105	0.000209000	63.4	U (0.001)	0.0078800
03/17/2022	--	76.92	0.273	0.106	0.214	0.683	0.186	2.80	0.0033400	41.6	0.168	0.857
06/22/2022	--	76.20	0.401	0.128	0.409	0.816	0.373	4.88	0.0094100	91.0	U(0.0500)	1.49
08/19/2022	--	77.72	U(0.00500)	U(0.00500)	0.09210	1.29	0.02370	0.638	0.0065700	104	U(0.00500)	0.0025300
10/05/2022	--	--	0.09080	0.04280	0.06440	0.565	0.131	0.885	0.0074600	66.2	U(0.00500)	0.198
03/09/2023	--	76.78	0.313	0.0820	0.159	0.941 B	0.157	2.00	0.0045300	45.9	0.0028300	0.4931
04/26/2023	--	77.76	—	—	0.03680	0.311	0.04870	0.625	0.0011600	61.5	U(0.00100)	0.118
07/13/2023	--	77.13	0.06790	0.0150	0.08590	1.08	0.08970	1.17	0.0081800	205	0.01130	0.0062900
11/03/2023	--	77.41	0.0130	U(0.00100)	0.0840	1.08	0.02990	0.487	0.0045900	235	0.0051800	0.02730
03/21/2024	--	77.05	0.0013200	0.003200	0.05970	0.252	0.01680	0.498	0.000513000	95.8	U(0.00100)	0.001200
06/17/2024	--	77.03	0.07150	0.0044400	0.06220	0.388	0.05190	0.679	0.0022700	108	0.0018900	0.058560
08/28/2024	--	77.18	0.0024200	U(0.00100)	0.05860	0.676	0.02380	0.60	0.0013700	136	0.0040100	0.017530
10/25/2024	--	77.19	0.02420	0.0058100	0.01980	U(0.840)	0.01640	0.412	0.0010900	110	0.00200	0.029250
RW19-1												
08/11/2020	--	73.12	—	—	0.0012600	U (0.848)	U (0.001)	U (0.100)	—	28.8	U (0.001)	0.000489000
10/12/2020	--	70.87	U (0.001)	U (0.001)	0.000609000	U (0.800)	U (0.001)	U (0.100)	U (0.000250)	28.6	U (0.001)	U (0.002)
03/23/2021	--	--	—	—	U (0.001)	U (0.840)	U (0.001)	0.01190	—	25.9	U (0.001)	U (0.003)
05/19/2021	--	--	U(0.00100)	U(0.00100)	U (0.001)	U (0.800)	U (0.001)	0.01580	U(0.00500)	28.8	U (0.001)	U (0.002)
07/14/2021	--	70.48	U (0.00100)	U (0.00100)	U (0.001)	0.297	U (0.001)	U (0.100)	U (0.00500)	28.8	U (0.001)	U (0.003)
10/14/2021	--	72.83	U(0.00100)	U(0.00100)	0.000506000	0.387	U (0.001)	0.04260	U(0.000250)	32.3	U (0.001)	U (0.002)
03/17/2022	--	75.68	0.0070200	0.0038800	0.0048800	U(0.888)	0.0031100	0.147	0.000108000	48.2	U(0.00100)	0.028120
06/23/2022	--	73.55	0.01690	0.0054700	0.02570	U(0.800)	0.0190	0.223	0.000452000	36.9	0.0016600	0.08220
08/19/2022	--	69.73	0.0017300	0.000659000	0.01070	0.443	0.0083800	0.21	0.000186000	36.9	0.0010400	0.022440
10/05/2022	--	--	0.0024500	0.000995000	0.0073700	U(0.800)	0.0067800	0.06320	0.000239000	33.6	U(0.00100)	0.0095300
03/09/2023	--	75.44	0.02950	0.0080100	0.02620	0.274 J,B	0.03530	0.24	0.000209 J	34.9	U(0.00100)	0.09580
04/26/2023	--	75.77	—	—	0.02080	0.355	0.02520	0.248	0.000483000	38.6	U(0.00100)	0.05210
07/13/2023	--	75.51	0.01210	0.0044400	0.02210	0.347	0.01830	0.253	U(0.000500)	56.0	0.000291000	0.000733000
11/03/2023	--	69.52	0.000608000	0.00056000	0.0069700	1.06	0.0060100	0.08810	U(0.000250)	29.3	U(0.00100)	0.0079100
03/21/2024	--	72.38	0.03020	0.0047900	0.117	0.224	0.09540	0.853	0.000264000	71.4	U(0.00100)	0.0021100
06/17/2024	--	71.78	0.004900	0.000741000	0.01150	U(0.800)	0.01340	0.08980	U(0.000250)	34.8	U(0.00500)	0.02630
08/28/2024	--	74.53	0.0018200	U(0.00500)	0.01770	0.366	0.0056500	0.132	0.00026000	38.7	U(0.00500)	0.01250
10/25/2024	--	76.13	0.0074300	0.0010400	0.08330	U(0.840)	0.07250	0.571	0.000662000	87.6	U(0.00100)	0.12435

Unit	ft	ft	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
GW Human Health Cleanup			0.056	0.06	0.0046	1.5	0.015	2.2	0.0017		1.1	0.19
Wetland												
06/17/2015	--	--	—	—	U(0.001000)	0.39	U(0.001000)	U(0.100)	—	—	U(0.001000)	0.006100
08/28/2024	--	--	0.08560	0.04390	0.006100	1.47	0.02250	0.594	0.0018200	57.1	0.0020200	0.6736
10/25/2024	--	--	0.02610	0.03620	0.0047600	0.223	0.01170	0.454	0.000281000	76.5	U(0.00100)	0.03080

APPENDIX E

*Laboratory Analytical Report and
ADEC Laboratory Data Review
Checklist*

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

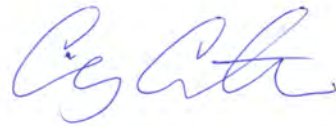
8 Al

9 Sc

7-11 Stantec - Anchorage, AK

Sample Delivery Group: L1794032
Samples Received: 10/30/2024
Project Number: 203723698
Description: Store 5314
Site: TNS 76
Report To: Ms. Sydney Souza
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 mydata.pacelabs.com

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SAMPLE SUMMARY

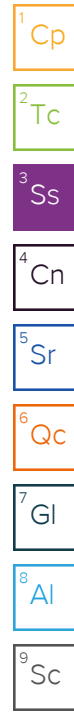
MW-1 L1794032-01 GW

Collected by
Remi Malenfant

Collected date/time
10/25/24 12:57

Received date/time
10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:02	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 03:40	11/02/24 03:40	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 12:59	11/06/24 12:59	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1.05	11/05/24 04:29	11/05/24 15:47	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 15:07	JDG	Mt. Juliet, TN



MW-2 L1794032-02 GW

Collected by
Remi Malenfant

Collected date/time
10/25/24 09:43

Received date/time
10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:04	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 09:53	11/02/24 09:53	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 13:20	11/06/24 13:20	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1	11/05/24 04:29	11/05/24 16:07	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 15:25	JDG	Mt. Juliet, TN

MW-3 L1794032-03 GW

Collected by
Remi Malenfant

Collected date/time
10/25/24 10:26

Received date/time
10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:06	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 10:16	11/02/24 10:16	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	5	11/06/24 17:53	11/06/24 17:53	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2398548	1	11/12/24 19:05	11/12/24 19:05	KST	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1.05	11/05/24 04:29	11/05/24 16:28	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 15:42	JDG	Mt. Juliet, TN

MW-4 L1794032-04 GW

Collected by
Remi Malenfant

Collected date/time
10/25/24 12:06

Received date/time
10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:07	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 10:39	11/02/24 10:39	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 13:41	11/06/24 13:41	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1.05	11/05/24 04:29	11/05/24 16:48	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 16:00	JDG	Mt. Juliet, TN

RW19-1 L1794032-05 GW

Collected by
Remi Malenfant

Collected date/time
10/25/24 11:56

Received date/time
10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:09	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 11:02	11/02/24 11:02	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 14:02	11/06/24 14:02	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1.05	11/05/24 04:29	11/05/24 17:08	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 16:18	JDG	Mt. Juliet, TN

SAMPLE SUMMARY

DUPLICATE #1 L1794032-06 GW

Collected by Remi Malenfant Collected date/time 10/25/24 00:00 Received date/time 10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:09	11/08/24 18:11	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2393958	1	11/02/24 11:24	11/02/24 11:24	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 14:23	11/06/24 14:23	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2394825	1.05	11/05/24 04:29	11/05/24 17:28	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2392756	1	11/01/24 05:11	11/04/24 16:36	JDG	Mt. Juliet, TN



CAMERON-7 L1794032-07 DW

Collected by Remi Malenfant Collected date/time 10/25/24 10:01 Received date/time 10/30/24 09:00

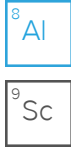
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 524.2	WG2394978	1	11/04/24 17:02	11/04/24 17:02	ADM	Mt. Juliet, TN



TRIP BLANK L1794032-08 GW

Collected by Remi Malenfant Collected date/time 10/25/24 00:00 Received date/time 10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 11:57	11/06/24 11:57	DYW	Mt. Juliet, TN



TRIP BLANK L1794032-09 GW

Collected by Remi Malenfant Collected date/time 10/25/24 00:00 Received date/time 10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 12:18	11/06/24 12:18	DYW	Mt. Juliet, TN

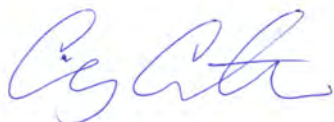
WETLAND L1794032-10 GW

Collected by Remi Malenfant Collected date/time 10/25/24 00:00 Received date/time 10/30/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2395847	1	11/08/24 08:06	11/08/24 18:12	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2398542	1	11/08/24 23:56	11/08/24 23:56	CDD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG2396418	1	11/06/24 14:44	11/06/24 14:44	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2395782	1	11/06/24 01:47	11/08/24 00:22	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2395963	1	11/05/24 17:56	11/06/24 12:48	MBE	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

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

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	70.9		0.504	3.00	1	11/08/2024 18:02	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.0607	<u>B J</u>	0.0287	0.100	1	11/02/2024 03:40	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	83.6			50.0-150		11/02/2024 03:40	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 03:40	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.00265		0.0000941	0.00100	1	11/06/2024 12:59	WG2396418
n-Butylbenzene	U		0.000157	0.00100	1	11/06/2024 12:59	WG2396418
sec-Butylbenzene	U		0.000125	0.00100	1	11/06/2024 12:59	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 12:59	WG2396418
Ethylbenzene	U		0.000137	0.00100	1	11/06/2024 12:59	WG2396418
Isopropylbenzene	U		0.000105	0.00100	1	11/06/2024 12:59	WG2396418
Naphthalene	U		0.00100	0.00500	1	11/06/2024 12:59	WG2396418
Toluene	U		0.000278	0.00100	1	11/06/2024 12:59	WG2396418
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/06/2024 12:59	WG2396418
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/06/2024 12:59	WG2396418
m&p-Xylene	U		0.000430	0.00200	1	11/06/2024 12:59	WG2396418
o-Xylene	U		0.000174	0.00100	1	11/06/2024 12:59	WG2396418
(S) Toluene-d8	109			80.0-120		11/06/2024 12:59	WG2396418
(S) 4-Bromofluorobenzene	91.1			77.0-126		11/06/2024 12:59	WG2396418
(S) 1,2-Dichloroethane-d4	101			70.0-130		11/06/2024 12:59	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

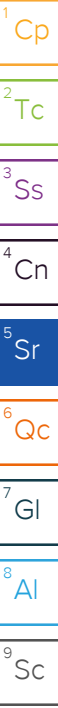
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	U		0.179	0.840	1.05	11/05/2024 15:47	WG2394825
(S) o-Terphenyl	12.0	<u>J2</u>		50.0-150		11/05/2024 15:47	WG2394825

Sample Narrative:

L1794032-01 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 15:07	WG2392756
Acenaphthene	U		0.0000190	0.0000500	1	11/04/2024 15:07	WG2392756
Acenaphthylene	U		0.0000171	0.0000500	1	11/04/2024 15:07	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 15:07	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 15:07	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 15:07	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 15:07	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 15:07	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 15:07	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 15:07	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 15:07	WG2392756
Fluorene	U		0.0000169	0.0000500	1	11/04/2024 15:07	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 15:07	WG2392756



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	U		0.0000917	0.000250	1	11/04/2024 15:07	WG2392756
Phenanthrene	U		0.0000180	0.0000500	1	11/04/2024 15:07	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 15:07	WG2392756
1-Methylnaphthalene	U		0.0000687	0.000250	1	11/04/2024 15:07	WG2392756
2-Methylnaphthalene	U		0.0000674	0.000250	1	11/04/2024 15:07	WG2392756
<i>(S)</i> Nitrobenzene-d5	113			31.0-160		11/04/2024 15:07	WG2392756
<i>(S)</i> 2-Fluorobiphenyl	115			48.0-148		11/04/2024 15:07	WG2392756
<i>(S)</i> p-Terphenyl-d14	111			37.0-146		11/04/2024 15:07	WG2392756

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

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	188		0.504	3.00	1	11/08/2024 18:04	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.368	<u>B</u>	0.0287	0.100	1	11/02/2024 09:53	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	78.5			50.0-150		11/02/2024 09:53	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 09:53	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0377		0.0000941	0.00100	1	11/06/2024 13:20	WG2396418
n-Butylbenzene	0.000204	<u>J</u>	0.000157	0.00100	1	11/06/2024 13:20	WG2396418
sec-Butylbenzene	0.000316	<u>J</u>	0.000125	0.00100	1	11/06/2024 13:20	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 13:20	WG2396418
Ethylbenzene	0.0141		0.000137	0.00100	1	11/06/2024 13:20	WG2396418
Isopropylbenzene	0.00161		0.000105	0.00100	1	11/06/2024 13:20	WG2396418
Naphthalene	U		0.00100	0.00500	1	11/06/2024 13:20	WG2396418
Toluene	0.00584		0.000278	0.00100	1	11/06/2024 13:20	WG2396418
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/06/2024 13:20	WG2396418
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/06/2024 13:20	WG2396418
m&p-Xylene	0.00361		0.000430	0.00200	1	11/06/2024 13:20	WG2396418
o-Xylene	0.00120		0.000174	0.00100	1	11/06/2024 13:20	WG2396418
(S) Toluene-d8	108			80.0-120		11/06/2024 13:20	WG2396418
(S) 4-Bromofluorobenzene	94.9			77.0-126		11/06/2024 13:20	WG2396418
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/06/2024 13:20	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	U		0.170	0.800	1	11/05/2024 16:07	WG2394825
(S) o-Terphenyl	20.7	<u>J2</u>		50.0-150		11/05/2024 16:07	WG2394825

Sample Narrative:

L1794032-02 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 15:25	WG2392756
Acenaphthene	U		0.0000190	0.0000500	1	11/04/2024 15:25	WG2392756
Acenaphthylene	U		0.0000171	0.0000500	1	11/04/2024 15:25	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 15:25	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 15:25	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 15:25	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 15:25	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 15:25	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 15:25	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 15:25	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 15:25	WG2392756
Fluorene	0.0000371	<u>J</u>	0.0000169	0.0000500	1	11/04/2024 15:25	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 15:25	WG2392756

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	0.00126		0.0000917	0.000250	1	11/04/2024 15:25	WG2392756
Phenanthrene	0.0000332	J	0.0000180	0.0000500	1	11/04/2024 15:25	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 15:25	WG2392756
1-Methylnaphthalene	0.000357		0.0000687	0.000250	1	11/04/2024 15:25	WG2392756
2-Methylnaphthalene	0.000525		0.0000674	0.000250	1	11/04/2024 15:25	WG2392756
(S) Nitrobenzene-d5	116			31.0-160		11/04/2024 15:25	WG2392756
(S) 2-Fluorobiphenyl	115			48.0-148		11/04/2024 15:25	WG2392756
(S) p-Terphenyl-d14	103			37.0-146		11/04/2024 15:25	WG2392756

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

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	120		0.504	3.00	1	11/08/2024 18:06	WG2395847

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.517	<u>B</u>	0.0287	0.100	1	11/02/2024 10:16	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	81.9			50.0-150		11/02/2024 10:16	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 10:16	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0214		0.000471	0.00500	5	11/06/2024 17:53	WG2396418
Benzene	0.0258	<u>Q</u>	0.0000941	0.00100	1	11/12/2024 19:05	WG2398548
n-Butylbenzene	U		0.000785	0.00500	5	11/06/2024 17:53	WG2396418
n-Butylbenzene	0.000349	<u>J Q</u>	0.000157	0.00100	1	11/12/2024 19:05	WG2398548
sec-Butylbenzene	U		0.000625	0.00500	5	11/06/2024 17:53	WG2396418
sec-Butylbenzene	0.000567	<u>J Q</u>	0.000125	0.00100	1	11/12/2024 19:05	WG2398548
tert-Butylbenzene	U		0.000635	0.00500	5	11/06/2024 17:53	WG2396418
tert-Butylbenzene	U	<u>Q</u>	0.000127	0.00100	1	11/12/2024 19:05	WG2398548
Ethylbenzene	0.0316		0.000685	0.00500	5	11/06/2024 17:53	WG2396418
Ethylbenzene	0.0219	<u>Q</u>	0.000137	0.00100	1	11/12/2024 19:05	WG2398548
Isopropylbenzene	0.00369	<u>J</u>	0.000525	0.00500	5	11/06/2024 17:53	WG2396418
Isopropylbenzene	0.00361	<u>Q</u>	0.000105	0.00100	1	11/12/2024 19:05	WG2398548
Naphthalene	U		0.00500	0.0250	5	11/06/2024 17:53	WG2396418
Naphthalene	U	<u>Q</u>	0.00100	0.00500	1	11/12/2024 19:05	WG2398548
Toluene	U		0.00139	0.00500	5	11/06/2024 17:53	WG2396418
Toluene	U	<u>Q</u>	0.000278	0.00100	1	11/12/2024 19:05	WG2398548
1,2,4-Trimethylbenzene	U		0.00161	0.00500	5	11/06/2024 17:53	WG2396418
1,2,4-Trimethylbenzene	0.000429	<u>J Q</u>	0.000322	0.00100	1	11/12/2024 19:05	WG2398548
1,3,5-Trimethylbenzene	U		0.000520	0.00500	5	11/06/2024 17:53	WG2396418
1,3,5-Trimethylbenzene	0.000136	<u>J Q</u>	0.000104	0.00100	1	11/12/2024 19:05	WG2398548
m&p-Xylene	0.00441	<u>J</u>	0.00215	0.0100	5	11/06/2024 17:53	WG2396418
m&p-Xylene	0.00168	<u>J Q</u>	0.000430	0.00200	1	11/12/2024 19:05	WG2398548
o-Xylene	U		0.000870	0.00500	5	11/06/2024 17:53	WG2396418
o-Xylene	0.000326	<u>J Q</u>	0.000174	0.00100	1	11/12/2024 19:05	WG2398548
(S) Toluene-d8	110			80.0-120		11/06/2024 17:53	WG2396418
(S) Toluene-d8	99.7			80.0-120		11/12/2024 19:05	WG2398548
(S) 4-Bromofluorobenzene	93.1			77.0-126		11/06/2024 17:53	WG2396418
(S) 4-Bromofluorobenzene	105			77.0-126		11/12/2024 19:05	WG2398548
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/06/2024 17:53	WG2396418
(S) 1,2-Dichloroethane-d4	94.6			70.0-130		11/12/2024 19:05	WG2398548

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	0.593	<u>J</u>	0.179	0.840	1.05	11/05/2024 16:28	WG2394825
(S) o-Terphenyl	21.2	<u>J2</u>		50.0-150		11/05/2024 16:28	WG2394825

Sample Narrative:

L1794032-03 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 15:42	WG2392756
Acenaphthene	0.0000234	U	0.0000190	0.0000500	1	11/04/2024 15:42	WG2392756
Acenaphthylene	0.0000215	U	0.0000171	0.0000500	1	11/04/2024 15:42	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 15:42	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 15:42	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 15:42	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 15:42	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 15:42	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 15:42	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 15:42	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 15:42	WG2392756
Fluorene	0.0000549		0.0000169	0.0000500	1	11/04/2024 15:42	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 15:42	WG2392756
Naphthalene	0.00460		0.0000917	0.000250	1	11/04/2024 15:42	WG2392756
Phenanthrene	0.0000199	U	0.0000180	0.0000500	1	11/04/2024 15:42	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 15:42	WG2392756
1-Methylnaphthalene	0.00113		0.0000687	0.000250	1	11/04/2024 15:42	WG2392756
2-Methylnaphthalene	0.00183		0.0000674	0.000250	1	11/04/2024 15:42	WG2392756
(S) Nitrobenzene-d5	128			31.0-160		11/04/2024 15:42	WG2392756
(S) 2-Fluorobiphenyl	109			48.0-148		11/04/2024 15:42	WG2392756
(S) p-Terphenyl-d14	96.9			37.0-146		11/04/2024 15:42	WG2392756

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	110		0.504	3.00	1	11/08/2024 18:07	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.412	<u>B</u>	0.0287	0.100	1	11/02/2024 10:39	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	84.8			50.0-150		11/02/2024 10:39	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 10:39	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0198		0.0000941	0.00100	1	11/06/2024 13:41	WG2396418
n-Butylbenzene	0.000563	<u>J</u>	0.000157	0.00100	1	11/06/2024 13:41	WG2396418
sec-Butylbenzene	0.00161		0.000125	0.00100	1	11/06/2024 13:41	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 13:41	WG2396418
Ethylbenzene	0.0164		0.000137	0.00100	1	11/06/2024 13:41	WG2396418
Isopropylbenzene	0.00841		0.000105	0.00100	1	11/06/2024 13:41	WG2396418
Naphthalene	0.00141	<u>J</u>	0.00100	0.00500	1	11/06/2024 13:41	WG2396418
Toluene	0.00200		0.000278	0.00100	1	11/06/2024 13:41	WG2396418
1,2,4-Trimethylbenzene	0.0242		0.000322	0.00100	1	11/06/2024 13:41	WG2396418
1,3,5-Trimethylbenzene	0.00581		0.000104	0.00100	1	11/06/2024 13:41	WG2396418
m&p-Xylene	0.0210		0.000430	0.00200	1	11/06/2024 13:41	WG2396418
o-Xylene	0.00825		0.000174	0.00100	1	11/06/2024 13:41	WG2396418
(S) Toluene-d8	109			80.0-120		11/06/2024 13:41	WG2396418
(S) 4-Bromofluorobenzene	93.6			77.0-126		11/06/2024 13:41	WG2396418
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/06/2024 13:41	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	U		0.179	0.840	1.05	11/05/2024 16:48	WG2394825
(S) o-Terphenyl	18.6	<u>J2</u>		50.0-150		11/05/2024 16:48	WG2394825

Sample Narrative:

L1794032-04 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 16:00	WG2392756
Acenaphthene	0.0000202	<u>J</u>	0.0000190	0.0000500	1	11/04/2024 16:00	WG2392756
Acenaphthylene	U		0.0000171	0.0000500	1	11/04/2024 16:00	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 16:00	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 16:00	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 16:00	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 16:00	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 16:00	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 16:00	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 16:00	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 16:00	WG2392756
Fluorene	0.0000422	<u>J</u>	0.0000169	0.0000500	1	11/04/2024 16:00	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 16:00	WG2392756

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	0.00109		0.0000917	0.000250	1	11/04/2024 16:00	WG2392756
Phenanthrene	0.0000202	J	0.0000180	0.0000500	1	11/04/2024 16:00	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 16:00	WG2392756
1-Methylnaphthalene	0.000803		0.0000687	0.000250	1	11/04/2024 16:00	WG2392756
2-Methylnaphthalene	0.00142		0.0000674	0.000250	1	11/04/2024 16:00	WG2392756
(S) Nitrobenzene-d5	119			31.0-160		11/04/2024 16:00	WG2392756
(S) 2-Fluorobiphenyl	114			48.0-148		11/04/2024 16:00	WG2392756
(S) p-Terphenyl-d14	105			37.0-146		11/04/2024 16:00	WG2392756

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

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	87.6		0.504	3.00	1	11/08/2024 18:09	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.571	<u>B</u>	0.0287	0.100	1	11/02/2024 11:02	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	83.2			50.0-150		11/02/2024 11:02	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 11:02	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0833		0.0000941	0.00100	1	11/06/2024 14:02	WG2396418
n-Butylbenzene	0.000374	<u>J</u>	0.000157	0.00100	1	11/06/2024 14:02	WG2396418
sec-Butylbenzene	0.00150		0.000125	0.00100	1	11/06/2024 14:02	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 14:02	WG2396418
Ethylbenzene	0.0725		0.000137	0.00100	1	11/06/2024 14:02	WG2396418
Isopropylbenzene	0.0119		0.000105	0.00100	1	11/06/2024 14:02	WG2396418
Naphthalene	0.00316	<u>J</u>	0.00100	0.00500	1	11/06/2024 14:02	WG2396418
Toluene	U		0.000278	0.00100	1	11/06/2024 14:02	WG2396418
1,2,4-Trimethylbenzene	0.00743		0.000322	0.00100	1	11/06/2024 14:02	WG2396418
1,3,5-Trimethylbenzene	0.00104		0.000104	0.00100	1	11/06/2024 14:02	WG2396418
m&p-Xylene	0.123		0.000430	0.00200	1	11/06/2024 14:02	WG2396418
o-Xylene	0.00135		0.000174	0.00100	1	11/06/2024 14:02	WG2396418
(S) Toluene-d8	108			80.0-120		11/06/2024 14:02	WG2396418
(S) 4-Bromofluorobenzene	93.3			77.0-126		11/06/2024 14:02	WG2396418
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/06/2024 14:02	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

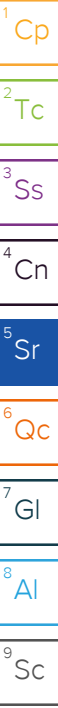
Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	U		0.179	0.840	1.05	11/05/2024 17:08	WG2394825
(S) o-Terphenyl	17.2	<u>J2</u>		50.0-150		11/05/2024 17:08	WG2394825

Sample Narrative:

L1794032-05 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 16:18	WG2392756
Acenaphthene	U		0.0000190	0.0000500	1	11/04/2024 16:18	WG2392756
Acenaphthylene	U		0.0000171	0.0000500	1	11/04/2024 16:18	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 16:18	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 16:18	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 16:18	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 16:18	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 16:18	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 16:18	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 16:18	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 16:18	WG2392756
Fluorene	U		0.0000169	0.0000500	1	11/04/2024 16:18	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 16:18	WG2392756



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	0.000662		0.0000917	0.000250	1	11/04/2024 16:18	WG2392756
Phenanthrene	U		0.0000180	0.0000500	1	11/04/2024 16:18	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 16:18	WG2392756
1-Methylnaphthalene	0.000262		0.0000687	0.000250	1	11/04/2024 16:18	WG2392756
2-Methylnaphthalene	0.000170	J	0.0000674	0.000250	1	11/04/2024 16:18	WG2392756
(S) Nitrobenzene-d5	127			31.0-160		11/04/2024 16:18	WG2392756
(S) 2-Fluorobiphenyl	119			48.0-148		11/04/2024 16:18	WG2392756
(S) p-Terphenyl-d14	115			37.0-146		11/04/2024 16:18	WG2392756

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

DUPLICATE #1

SAMPLE RESULTS - 06

Collected date/time: 10/25/24 00:00

L1794032

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	121		0.504	3.00	1	11/08/2024 18:11	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.499	<u>B</u>	0.0287	0.100	1	11/02/2024 11:24	WG2393958
(S) a,a,a-Trifluorotoluene(FID)	84.1			50.0-150		11/02/2024 11:24	WG2393958
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/02/2024 11:24	WG2393958

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.0310		0.0000941	0.00100	1	11/06/2024 14:23	WG2396418
n-Butylbenzene	0.000713	<u>J</u>	0.000157	0.00100	1	11/06/2024 14:23	WG2396418
sec-Butylbenzene	0.00120		0.000125	0.00100	1	11/06/2024 14:23	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 14:23	WG2396418
Ethylbenzene	0.0907		0.000137	0.00100	1	11/06/2024 14:23	WG2396418
Isopropylbenzene	0.00999		0.000105	0.00100	1	11/06/2024 14:23	WG2396418
Naphthalene	0.00144	<u>J</u>	0.00100	0.00500	1	11/06/2024 14:23	WG2396418
Toluene	0.000409	<u>J</u>	0.000278	0.00100	1	11/06/2024 14:23	WG2396418
1,2,4-Trimethylbenzene	0.00696		0.000322	0.00100	1	11/06/2024 14:23	WG2396418
1,3,5-Trimethylbenzene	0.000345	<u>J</u>	0.000104	0.00100	1	11/06/2024 14:23	WG2396418
m&p-Xylene	0.0605		0.000430	0.00200	1	11/06/2024 14:23	WG2396418
o-Xylene	0.00582		0.000174	0.00100	1	11/06/2024 14:23	WG2396418
(S) Toluene-d8	106			80.0-120		11/06/2024 14:23	WG2396418
(S) 4-Bromofluorobenzene	93.1			77.0-126		11/06/2024 14:23	WG2396418
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/06/2024 14:23	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	0.447	<u>J</u>	0.179	0.840	1.05	11/05/2024 17:28	WG2394825
(S) o-Terphenyl	14.1	<u>J2</u>		50.0-150		11/05/2024 17:28	WG2394825

Sample Narrative:

L1794032-06 WG2394825: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U		0.0000190	0.0000500	1	11/04/2024 16:36	WG2392756
Acenaphthene	0.0000368	<u>J</u>	0.0000190	0.0000500	1	11/04/2024 16:36	WG2392756
Acenaphthylene	0.0000273	<u>J</u>	0.0000171	0.0000500	1	11/04/2024 16:36	WG2392756
Benzo(a)anthracene	U		0.0000203	0.0000500	1	11/04/2024 16:36	WG2392756
Benzo(a)pyrene	U		0.0000184	0.0000500	1	11/04/2024 16:36	WG2392756
Benzo(b)fluoranthene	U		0.0000168	0.0000500	1	11/04/2024 16:36	WG2392756
Benzo(g,h,i)perylene	U		0.0000184	0.0000500	1	11/04/2024 16:36	WG2392756
Benzo(k)fluoranthene	U		0.0000202	0.0000500	1	11/04/2024 16:36	WG2392756
Chrysene	U		0.0000179	0.0000500	1	11/04/2024 16:36	WG2392756
Dibenz(a,h)anthracene	U		0.0000160	0.0000500	1	11/04/2024 16:36	WG2392756
Fluoranthene	U		0.0000270	0.000100	1	11/04/2024 16:36	WG2392756
Fluorene	0.0000701		0.0000169	0.0000500	1	11/04/2024 16:36	WG2392756
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500	1	11/04/2024 16:36	WG2392756

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

DUPLICATE #1

SAMPLE RESULTS - 06

Collected date/time: 10/25/24 00:00

L1794032

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Naphthalene	0.00538		0.0000917	0.000250	1	11/04/2024 16:36	WG2392756
Phenanthrene	U		0.0000180	0.0000500	1	11/04/2024 16:36	WG2392756
Pyrene	U		0.0000169	0.0000500	1	11/04/2024 16:36	WG2392756
1-Methylnaphthalene	0.00137		0.0000687	0.000250	1	11/04/2024 16:36	WG2392756
2-Methylnaphthalene	0.00227		0.0000674	0.000250	1	11/04/2024 16:36	WG2392756
<i>(S)</i> Nitrobenzene-d5	131			31.0-160		11/04/2024 16:36	WG2392756
<i>(S)</i> 2-Fluorobiphenyl	112			48.0-148		11/04/2024 16:36	WG2392756
<i>(S)</i> p-Terphenyl-d14	108			37.0-146		11/04/2024 16:36	WG2392756

- 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 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	U		0.0000490	0.000500	1	11/04/2024 17:02	WG2394978
Carbon tetrachloride	U		0.0000660	0.000500	1	11/04/2024 17:02	WG2394978
1,4-Dichlorobenzene	U		0.0000310	0.000500	1	11/04/2024 17:02	WG2394978
1,2-Dichloroethane	U		0.0000498	0.000500	1	11/04/2024 17:02	WG2394978
1,1-Dichloroethene	U		0.0000540	0.000500	1	11/04/2024 17:02	WG2394978
1,1,1-Trichloroethane	U		0.0000490	0.000500	1	11/04/2024 17:02	WG2394978
Trichloroethene	U		0.0000440	0.000500	1	11/04/2024 17:02	WG2394978
Vinyl chloride	U		0.0000260	0.000500	1	11/04/2024 17:02	WG2394978
1,2,4-Trichlorobenzene	U		0.0000530	0.000500	1	11/04/2024 17:02	WG2394978
cis-1,2-Dichloroethene	U		0.0000640	0.000500	1	11/04/2024 17:02	WG2394978
Xylenes, Total	U		0.000340	0.000500	1	11/04/2024 17:02	WG2394978
Methylene chloride	U		0.0000608	0.000500	1	11/04/2024 17:02	WG2394978
1,2-Dichlorobenzene	U		0.0000410	0.000500	1	11/04/2024 17:02	WG2394978
trans-1,2-Dichloroethene	U		0.000100	0.000500	1	11/04/2024 17:02	WG2394978
1,2-Dichloropropane	U		0.0000270	0.000500	1	11/04/2024 17:02	WG2394978
1,1,2-Trichloroethane	U		0.0000701	0.000500	1	11/04/2024 17:02	WG2394978
Tetrachloroethene	U		0.0000790	0.000500	1	11/04/2024 17:02	WG2394978
Chlorobenzene	U		0.0000370	0.000500	1	11/04/2024 17:02	WG2394978
Toluene	U		0.000412	0.000500	1	11/04/2024 17:02	WG2394978
Ethylbenzene	U		0.0000440	0.000500	1	11/04/2024 17:02	WG2394978
Styrene	U		0.0000360	0.000500	1	11/04/2024 17:02	WG2394978
Bromobenzene	U		0.0000490	0.000500	1	11/04/2024 17:02	WG2394978
Bromodichloromethane	U		0.0000810	0.000500	1	11/04/2024 17:02	WG2394978
Bromoform	U		0.0000800	0.000500	1	11/04/2024 17:02	WG2394978
Bromomethane	U		0.0000790	0.00100	1	11/04/2024 17:02	WG2394978
Chlorodibromomethane	U		0.0000930	0.000500	1	11/04/2024 17:02	WG2394978
Chloroethane	U		0.000190	0.000500	1	11/04/2024 17:02	WG2394978
Chloroform	U		0.0000800	0.000500	1	11/04/2024 17:02	WG2394978
Chloromethane	U		0.0000290	0.000500	1	11/04/2024 17:02	WG2394978
2-Chlorotoluene	U		0.0000480	0.000500	1	11/04/2024 17:02	WG2394978
4-Chlorotoluene	U		0.0000550	0.000500	1	11/04/2024 17:02	WG2394978
Dibromomethane	U		0.0000700	0.000500	1	11/04/2024 17:02	WG2394978
1,3-Dichlorobenzene	U		0.0000360	0.000500	1	11/04/2024 17:02	WG2394978
1,1-Dichloroethane	U		0.0000240	0.000500	1	11/04/2024 17:02	WG2394978
1,3-Dichloropropane	U		0.0000230	0.000500	1	11/04/2024 17:02	WG2394978
2,2-Dichloropropane	U		0.0000680	0.000500	1	11/04/2024 17:02	WG2394978
1,1-Dichloropropene	U		0.0000450	0.000500	1	11/04/2024 17:02	WG2394978
1,3-Dichloropropene	U		0.000150	0.000500	1	11/04/2024 17:02	WG2394978
1,1,1,2-Tetrachloroethane	U		0.0000700	0.000500	1	11/04/2024 17:02	WG2394978
1,1,2,2-Tetrachloroethane	U		0.0000790	0.000500	1	11/04/2024 17:02	WG2394978
1,2,3-Trichloropropane	U		0.0000720	0.000500	1	11/04/2024 17:02	WG2394978

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 524.2/8260C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	11/06/2024 11:57	WG2396418
n-Butylbenzene	U		0.000157	0.00100	1	11/06/2024 11:57	WG2396418
sec-Butylbenzene	U		0.000125	0.00100	1	11/06/2024 11:57	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 11:57	WG2396418
Ethylbenzene	U		0.000137	0.00100	1	11/06/2024 11:57	WG2396418
Isopropylbenzene	U		0.000105	0.00100	1	11/06/2024 11:57	WG2396418
Naphthalene	U		0.00100	0.00500	1	11/06/2024 11:57	WG2396418
Toluene	U		0.000278	0.00100	1	11/06/2024 11:57	WG2396418
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/06/2024 11:57	WG2396418
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/06/2024 11:57	WG2396418
m&p-Xylene	U		0.000430	0.00200	1	11/06/2024 11:57	WG2396418
o-Xylene	U		0.000174	0.00100	1	11/06/2024 11:57	WG2396418
(S) Toluene-d8	108			80.0-120		11/06/2024 11:57	WG2396418
(S) 4-Bromofluorobenzene	91.1			77.0-126		11/06/2024 11:57	WG2396418
(S) 1,2-Dichloroethane-d4	104			70.0-130		11/06/2024 11:57	WG2396418

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 524.2/8260C

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	11/06/2024 12:18	WG2396418
n-Butylbenzene	U		0.000157	0.00100	1	11/06/2024 12:18	WG2396418
sec-Butylbenzene	U		0.000125	0.00100	1	11/06/2024 12:18	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 12:18	WG2396418
Ethylbenzene	U		0.000137	0.00100	1	11/06/2024 12:18	WG2396418
Isopropylbenzene	U		0.000105	0.00100	1	11/06/2024 12:18	WG2396418
Naphthalene	U		0.00100	0.00500	1	11/06/2024 12:18	WG2396418
Toluene	U		0.000278	0.00100	1	11/06/2024 12:18	WG2396418
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	11/06/2024 12:18	WG2396418
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	11/06/2024 12:18	WG2396418
m&p-Xylene	U		0.000430	0.00200	1	11/06/2024 12:18	WG2396418
o-Xylene	U		0.000174	0.00100	1	11/06/2024 12:18	WG2396418
(S) Toluene-d8	109			80.0-120		11/06/2024 12:18	WG2396418
(S) 4-Bromofluorobenzene	91.6			77.0-126		11/06/2024 12:18	WG2396418
(S) 1,2-Dichloroethane-d4	102			70.0-130		11/06/2024 12:18	WG2396418

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Sodium	76.5		0.504	3.00	1	11/08/2024 18:12	WG2395847

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPHGAK C6 to C10	0.454	<u>B</u>	0.0287	0.100	1	11/08/2024 23:56	WG2398542
(S) a,a,a-Trifluorotoluene(FID)	81.3			50.0-150		11/08/2024 23:56	WG2398542
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125		11/08/2024 23:56	WG2398542

Volatile Organic Compounds (GC/MS) by Method 524.2/8260C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Benzene	0.00476		0.0000941	0.00100	1	11/06/2024 14:44	WG2396418
n-Butylbenzene	U		0.000157	0.00100	1	11/06/2024 14:44	WG2396418
sec-Butylbenzene	0.000838	<u>J</u>	0.000125	0.00100	1	11/06/2024 14:44	WG2396418
tert-Butylbenzene	U		0.000127	0.00100	1	11/06/2024 14:44	WG2396418
Ethylbenzene	0.0117		0.000137	0.00100	1	11/06/2024 14:44	WG2396418
Isopropylbenzene	0.00151		0.000105	0.00100	1	11/06/2024 14:44	WG2396418
Naphthalene	0.00242	<u>J</u>	0.00100	0.00500	1	11/06/2024 14:44	WG2396418
Toluene	U		0.000278	0.00100	1	11/06/2024 14:44	WG2396418
1,2,4-Trimethylbenzene	0.0261		0.000322	0.00100	1	11/06/2024 14:44	WG2396418
1,3,5-Trimethylbenzene	0.0362		0.000104	0.00100	1	11/06/2024 14:44	WG2396418
m&p-Xylene	0.0307		0.000430	0.00200	1	11/06/2024 14:44	WG2396418
o-Xylene	U		0.000174	0.00100	1	11/06/2024 14:44	WG2396418
(S) Toluene-d8	108			80.0-120		11/06/2024 14:44	WG2396418
(S) 4-Bromofluorobenzene	92.6			77.0-126		11/06/2024 14:44	WG2396418
(S) 1,2-Dichloroethane-d4	103			70.0-130		11/06/2024 14:44	WG2396418

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
AK102 DRO C10-C25	0.223	<u>J</u>	0.170	0.800	1	11/08/2024 00:22	WG2395782
(S) o-Terphenyl	114			50.0-150		11/08/2024 00:22	WG2395782

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Anthracene	U	<u>T8</u>	0.0000190	0.0000500	1	11/06/2024 12:48	WG2395963
Acenaphthene	U	<u>T8</u>	0.0000190	0.0000500	1	11/06/2024 12:48	WG2395963
Acenaphthylene	U	<u>T8</u>	0.0000171	0.0000500	1	11/06/2024 12:48	WG2395963
Benzo(a)anthracene	U	<u>T8</u>	0.0000203	0.0000500	1	11/06/2024 12:48	WG2395963
Benzo(a)pyrene	U	<u>T8</u>	0.0000184	0.0000500	1	11/06/2024 12:48	WG2395963
Benzo(b)fluoranthene	U	<u>T8</u>	0.0000168	0.0000500	1	11/06/2024 12:48	WG2395963
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0000184	0.0000500	1	11/06/2024 12:48	WG2395963
Benzo(k)fluoranthene	U	<u>T8</u>	0.0000202	0.0000500	1	11/06/2024 12:48	WG2395963
Chrysene	U	<u>T8</u>	0.0000179	0.0000500	1	11/06/2024 12:48	WG2395963
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0000160	0.0000500	1	11/06/2024 12:48	WG2395963
Fluoranthene	U	<u>T8</u>	0.0000270	0.000100	1	11/06/2024 12:48	WG2395963
Fluorene	U	<u>T8</u>	0.0000169	0.0000500	1	11/06/2024 12:48	WG2395963
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0000158	0.0000500	1	11/06/2024 12:48	WG2395963
Naphthalene	0.000281	<u>T8</u>	0.0000917	0.000250	1	11/06/2024 12:48	WG2395963
Phenanthrene	U	<u>T8</u>	0.0000180	0.0000500	1	11/06/2024 12:48	WG2395963
Pyrene	U	<u>T8</u>	0.0000169	0.0000500	1	11/06/2024 12:48	WG2395963

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1-Methylnaphthalene	0.000105	<u>J T8</u>	0.0000687	0.000250	1	11/06/2024 12:48	WG2395963
2-Methylnaphthalene	U	<u>T8</u>	0.0000674	0.000250	1	11/06/2024 12:48	WG2395963
<i>(S)</i> Nitrobenzene-d5	114			31.0-160		11/06/2024 12:48	WG2395963
<i>(S)</i> 2-Fluorobiphenyl	112			48.0-148		11/06/2024 12:48	WG2395963
<i>(S)</i> p-Terphenyl-d14	113			37.0-146		11/06/2024 12:48	WG2395963

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

Method Blank (MB)

(MB) R4143981-1 11/08/24 17:38

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

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R4143981-2 11/08/24 17:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sodium	10.0	10.1	101	80.0-120	

4 Cn

5 Sr

L1794046-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1794046-01 11/08/24 17:42 • (MS) R4143981-4 11/08/24 17:45 • (MSD) R4143981-5 11/08/24 17:47

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 %
Sodium	10.0	124	134	135	108	112	1	75.0-125			0.324	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4141656-3 11/01/24 23:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPHGAK C6 to C10	0.0587	<u>J</u>	0.0287	0.100
(S) a,a,a-Trifluorotoluene(FID)	81.9			60.0-120
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125

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

(LCS) R4141656-1 11/01/24 20:26 • (LCSD) R4141656-2 11/01/24 20:49

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 %
TPHGAK C6 to C10	5.00	4.19	4.53	83.8	90.6	60.0-120			7.80	20
(S) a,a,a-Trifluorotoluene(FID)				93.3	97.4	60.0-120				
(S) a,a,a-Trifluorotoluene(PID)				0.000	0.000	79.0-125	<u>J2</u>	<u>J2</u>		

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4145003-3 11/08/24 23:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPHGAK C6 to C10	0.0918	<u>J</u>	0.0287	0.100
(S) a,a,a-Trifluorotoluene(FID)	87.7			60.0-120
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		79.0-125

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

(LCS) R4145003-1 11/08/24 19:04 • (LCSD) R4145003-2 11/08/24 19:26

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 %
TPHGAK C6 to C10	5.00	5.27	5.37	105	107	60.0-120			1.88	20
(S) a,a,a-Trifluorotoluene(FID)				99.9	103	60.0-120				
(S) a,a,a-Trifluorotoluene(PID)				0.000	0.000	79.0-125	<u>J2</u>	<u>J2</u>		

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R4142536-2 11/04/24 11:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.000490	0.000500
Carbon tetrachloride	U		0.000660	0.000500
1,4-Dichlorobenzene	U		0.000310	0.000500
1,2-Dichloroethane	U		0.000498	0.000500
1,1-Dichloroethene	U		0.000540	0.000500
1,1,1-Trichloroethane	U		0.000490	0.000500
Trichloroethene	U		0.000440	0.000500
Vinyl chloride	U		0.000260	0.000500
1,2,4-Trichlorobenzene	U		0.000530	0.000500
cis-1,2-Dichloroethene	U		0.000640	0.000500
Xylenes, Total	U		0.000340	0.000500
Methylene chloride	U		0.000608	0.000500
1,2-Dichlorobenzene	U		0.000410	0.000500
trans-1,2-Dichloroethene	U		0.000100	0.000500
1,2-Dichloropropane	U		0.000270	0.000500
1,1,2-Trichloroethane	U		0.000701	0.000500
Tetrachloroethene	U		0.000790	0.000500
Chlorobenzene	U		0.000370	0.000500
Toluene	U		0.000412	0.000500
Ethylbenzene	U		0.000440	0.000500
Styrene	U		0.000360	0.000500
Bromobenzene	U		0.000490	0.000500
Bromodichloromethane	U		0.000810	0.000500
Bromoform	U		0.000800	0.000500
Bromomethane	U		0.000790	0.001000
Chlorodibromomethane	U		0.000930	0.000500
Chloroethane	U		0.000190	0.000500
Chloroform	U		0.000800	0.000500
Chloromethane	U		0.000290	0.000500
2-Chlorotoluene	U		0.000480	0.000500
4-Chlorotoluene	U		0.000550	0.000500
Dibromomethane	U		0.000700	0.000500
1,3-Dichlorobenzene	U		0.000360	0.000500
1,1-Dichloroethane	U		0.000240	0.000500
1,3-Dichloropropane	U		0.000230	0.000500
2,2-Dichloropropane	U		0.000680	0.000500
1,1-Dichloropropene	U		0.000450	0.000500
1,3-Dichloropropene	U		0.000150	0.000500
1,1,1,2-Tetrachloroethane	U		0.000700	0.000500
1,1,2,2-Tetrachloroethane	U		0.000790	0.000500

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4142536-2 11/04/24 11:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
1,2,3-Trichloropropane	U		0.0000720	0.000500

Laboratory Control Sample (LCS)

(LCS) R4142536-1 11/04/24 10:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Benzene	0.00500	0.00455	91.0	70.0-130	
Carbon tetrachloride	0.00500	0.00462	92.4	70.0-130	
1,4-Dichlorobenzene	0.00500	0.00432	86.4	70.0-130	
1,2-Dichloroethane	0.00500	0.00457	91.4	70.0-130	
1,1-Dichloroethene	0.00500	0.00458	91.6	70.0-130	
1,1,1-Trichloroethane	0.00500	0.00460	92.0	70.0-130	
Trichloroethene	0.00500	0.00453	90.6	70.0-130	
Vinyl chloride	0.00500	0.00463	92.6	70.0-130	
1,2,4-Trichlorobenzene	0.00500	0.00428	85.6	70.0-130	
cis-1,2-Dichloroethene	0.00500	0.00452	90.4	70.0-130	
Xylenes, Total	0.0150	0.0137	91.3	70.0-130	
Methylene chloride	0.00500	0.00433	86.6	70.0-130	
1,2-Dichlorobenzene	0.00500	0.00435	87.0	70.0-130	
trans-1,2-Dichloroethene	0.00500	0.00459	91.8	70.0-130	
1,2-Dichloropropane	0.00500	0.00438	87.6	70.0-130	
1,1,2-Trichloroethane	0.00500	0.00455	91.0	70.0-130	
Tetrachloroethene	0.00500	0.00471	94.2	70.0-130	
Chlorobenzene	0.00500	0.00451	90.2	70.0-130	
Toluene	0.00500	0.00451	90.2	70.0-130	
Ethylbenzene	0.00500	0.00448	89.6	70.0-130	
Styrene	0.00500	0.00465	93.0	70.0-130	
Bromobenzene	0.00500	0.00456	91.2	70.0-130	
Bromodichloromethane	0.00500	0.00459	91.8	70.0-130	
Bromoform	0.00500	0.00441	88.2	70.0-130	
Bromomethane	0.00500	0.00440	88.0	70.0-130	
Chlorodibromomethane	0.00500	0.00445	89.0	70.0-130	
Chloroethane	0.00500	0.00494	98.8	70.0-130	
Chloroform	0.00500	0.00459	91.8	70.0-130	
Chloromethane	0.00500	0.00413	82.6	70.0-130	
2-Chlorotoluene	0.00500	0.00444	88.8	70.0-130	
4-Chlorotoluene	0.00500	0.00438	87.6	70.0-130	
Dibromomethane	0.00500	0.00445	89.0	70.0-130	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R4142536-1 11/04/24 10:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
1,3-Dichlorobenzene	0.00500	0.00443	88.6	70.0-130	
1,1-Dichloroethane	0.00500	0.00458	91.6	70.0-130	
1,3-Dichloropropane	0.00500	0.00435	87.0	70.0-130	
2,2-Dichloropropane	0.00500	0.00465	93.0	70.0-130	
1,1-Dichloropropene	0.00500	0.00456	91.2	70.0-130	
1,3-Dichloropropene	0.0100	0.00908	90.8	70.0-130	
1,1,1,2-Tetrachloroethane	0.00500	0.00451	90.2	70.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00430	86.0	70.0-130	
1,2,3-Trichloropropane	0.00500	0.00451	90.2	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R4143915-3 11/06/24 09:37

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
m&p-Xylene	U		0.000430	0.00200
o-Xylene	U		0.000174	0.00100
(S) Toluene-d8	109			80.0-120
(S) 4-Bromofluorobenzene	91.4			77.0-126
(S) 1,2-Dichloroethane-d4	105			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R4143915-1 11/06/24 08:34 • (LCSD) R4143915-2 11/06/24 08:55

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	0.00508	0.00511	102	102	70.0-123			0.589	20
n-Butylbenzene	0.00500	0.00467	0.00466	93.4	93.2	73.0-125			0.214	20
sec-Butylbenzene	0.00500	0.00523	0.00530	105	106	75.0-125			1.33	20
tert-Butylbenzene	0.00500	0.00514	0.00526	103	105	76.0-124			2.31	20
Ethylbenzene	0.00500	0.00502	0.00491	100	98.2	79.0-123			2.22	20
Isopropylbenzene	0.00500	0.00516	0.00515	103	103	76.0-127			0.194	20
Naphthalene	0.00500	0.00490	0.00524	98.0	105	54.0-135	J		6.71	20
Toluene	0.00500	0.00523	0.00513	105	103	79.0-120			1.93	20
1,2,4-Trimethylbenzene	0.00500	0.00486	0.00485	97.2	97.0	76.0-121			0.206	20
1,3,5-Trimethylbenzene	0.00500	0.00509	0.00511	102	102	76.0-122			0.392	20
m&p-Xylene	0.0100	0.00991	0.00992	99.1	99.2	80.0-122			0.101	20
o-Xylene	0.00500	0.00490	0.00482	98.0	96.4	80.0-122			1.65	20
(S) Toluene-d8				109	108	80.0-120				
(S) 4-Bromofluorobenzene				93.7	93.7	77.0-126				
(S) 1,2-Dichloroethane-d4				103	103	70.0-130				

Method Blank (MB)

(MB) R4145406-3 11/12/24 18:28

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
m&p-Xylene	U		0.000430	0.00200
o-Xylene	U		0.000174	0.00100
(S) Toluene-d8	100			80.0-120
(S) 4-Bromofluorobenzene	105			77.0-126
(S) 1,2-Dichloroethane-d4	95.7			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R4145406-1 11/12/24 17:24 • (LCSD) R4145406-2 11/12/24 17:46

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	0.00482	0.00461	96.4	92.2	70.0-123			4.45	20
n-Butylbenzene	0.00500	0.00486	0.00445	97.2	89.0	73.0-125			8.81	20
sec-Butylbenzene	0.00500	0.00485	0.00454	97.0	90.8	75.0-125			6.60	20
tert-Butylbenzene	0.00500	0.00472	0.00457	94.4	91.4	76.0-124			3.23	20
Ethylbenzene	0.00500	0.00466	0.00470	93.2	94.0	79.0-123			0.855	20
Isopropylbenzene	0.00500	0.00488	0.00479	97.6	95.8	76.0-127			1.86	20
Naphthalene	0.00500	0.00504	0.00439	101	87.8	54.0-135		↓	13.8	20
Toluene	0.00500	0.00465	0.00450	93.0	90.0	79.0-120			3.28	20
1,2,4-Trimethylbenzene	0.00500	0.00473	0.00447	94.6	89.4	76.0-121			5.65	20
1,3,5-Trimethylbenzene	0.00500	0.00467	0.00458	93.4	91.6	76.0-122			1.95	20
m&p-Xylene	0.0100	0.00949	0.00950	94.9	95.0	80.0-122			0.105	20
o-Xylene	0.00500	0.00481	0.00469	96.2	93.8	80.0-122			2.53	20
(S) Toluene-d8				98.9	99.7	80.0-120				
(S) 4-Bromofluorobenzene				104	104	77.0-126				
(S) 1,2-Dichloroethane-d4				96.3	95.9	70.0-130				

Method Blank (MB)

(MB) R4142619-1 11/05/24 13:46

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
AK102 DRO C10-C25	U		0.170	0.800
<i>(S) o-Terphenyl</i>	119			60.0-120

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

(LCS) R4142619-2 11/05/24 14:06 • (LCSD) R4142619-3 11/05/24 14:27

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
AK102 DRO C10-C25	6.00	5.24	5.50	87.3	91.7	75.0-125			4.84	20
<i>(S) o-Terphenyl</i>				122	119	60.0-120	J1			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4143516-1 11/07/24 23:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
AK102 DRO C10-C25	U		0.170	0.800
<i>(S) o-Terphenyl</i>	111			60.0-120

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

(LCS) R4143516-2 11/07/24 23:21 • (LCSD) R4143516-3 11/07/24 23:41

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
AK102 DRO C10-C25	6.00	5.23	5.37	87.2	89.5	75.0-125			2.64	20
<i>(S) o-Terphenyl</i>				123	115	60.0-120	J1			

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

Method Blank (MB)

(MB) R4142281-3 11/04/24 11:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000190	0.0000500
Acenaphthene	U		0.0000190	0.0000500
Acenaphthylene	U		0.0000171	0.0000500
Benzo(a)anthracene	U		0.0000203	0.0000500
Benzo(a)pyrene	U		0.0000184	0.0000500
Benzo(b)fluoranthene	U		0.0000168	0.0000500
Benzo(g,h,i)perylene	U		0.0000184	0.0000500
Benzo(k)fluoranthene	U		0.0000202	0.0000500
Chrysene	U		0.0000179	0.0000500
Dibenz(a,h)anthracene	U		0.0000160	0.0000500
Fluoranthene	U		0.0000270	0.000100
Fluorene	U		0.0000169	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500
Naphthalene	U		0.0000917	0.000250
Phenanthrene	U		0.0000180	0.0000500
Pyrene	U		0.0000169	0.0000500
1-Methylnaphthalene	U		0.0000687	0.000250
2-Methylnaphthalene	U		0.0000674	0.000250
(S) Nitrobenzene-d5	116			31.0-160
(S) 2-Fluorobiphenyl	112			48.0-148
(S) p-Terphenyl-d14	105			37.0-146

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R4142281-1 11/04/24 10:57 • (LCSD) R4142281-2 11/04/24 11:15

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 %
Anthracene	0.00200	0.00200	0.00213	100	106	67.0-150			6.30	20
Acenaphthene	0.00200	0.00190	0.00203	95.0	102	65.0-138			6.62	20
Acenaphthylene	0.00200	0.00203	0.00218	102	109	66.0-140			7.13	20
Benzo(a)anthracene	0.00200	0.00195	0.00208	97.5	104	61.0-140			6.45	20
Benzo(a)pyrene	0.00200	0.00178	0.00177	89.0	88.5	60.0-143			0.563	20
Benzo(b)fluoranthene	0.00200	0.00183	0.00189	91.5	94.5	58.0-141			3.23	20
Benzo(g,h,i)perylene	0.00200	0.00160	0.00151	80.0	75.5	52.0-153			5.79	20
Benzo(k)fluoranthene	0.00200	0.00177	0.00170	88.5	85.0	58.0-148			4.03	20
Chrysene	0.00200	0.00193	0.00207	96.5	104	64.0-144			7.00	20
Dibenz(a,h)anthracene	0.00200	0.00168	0.00154	84.0	77.0	52.0-155			8.70	20
Fluoranthene	0.00200	0.00204	0.00219	102	109	69.0-153			7.09	20
Fluorene	0.00200	0.00216	0.00216	108	108	64.0-136			0.000	20

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

(LCS) R4142281-1 11/04/24 10:57 • (LCSD) R4142281-2 11/04/24 11:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Indeno(1,2,3-cd)pyrene	0.00200	0.00164	0.00159	82.0	79.5	54.0-153			3.10	20
Naphthalene	0.00200	0.00201	0.00214	100	107	61.0-137			6.27	20
Phenanthrene	0.00200	0.00199	0.00212	99.5	106	62.0-137			6.33	20
Pyrene	0.00200	0.00193	0.00207	96.5	104	60.0-142			7.00	20
1-Methylnaphthalene	0.00200	0.00223	0.00240	111	120	66.0-142			7.34	20
2-Methylnaphthalene	0.00200	0.00215	0.00228	107	114	62.0-136			5.87	20
<i>(S) Nitrobenzene-d5</i>				115	119	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				111	115	48.0-148				
<i>(S) p-Terphenyl-d14</i>				96.0	101	37.0-146				

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

Method Blank (MB)

(MB) R4145713-3 11/06/24 10:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Anthracene	U		0.0000190	0.0000500
Acenaphthene	U		0.0000190	0.0000500
Acenaphthylene	U		0.0000171	0.0000500
Benzo(a)anthracene	U		0.0000203	0.0000500
Benzo(a)pyrene	U		0.0000184	0.0000500
Benzo(b)fluoranthene	U		0.0000168	0.0000500
Benzo(g,h,i)perylene	U		0.0000184	0.0000500
Benzo(k)fluoranthene	U		0.0000202	0.0000500
Chrysene	U		0.0000179	0.0000500
Dibenz(a,h)anthracene	U		0.0000160	0.0000500
Fluoranthene	U		0.0000270	0.000100
Fluorene	U		0.0000169	0.0000500
Indeno(1,2,3-cd)pyrene	U		0.0000158	0.0000500
Naphthalene	U		0.0000917	0.000250
Phenanthrene	U		0.0000180	0.0000500
Pyrene	U		0.0000169	0.0000500
1-Methylnaphthalene	U		0.0000687	0.000250
2-Methylnaphthalene	U		0.0000674	0.000250
(S) Nitrobenzene-d5	110			31.0-160
(S) 2-Fluorobiphenyl	115			48.0-148
(S) p-Terphenyl-d14	114			37.0-146

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

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

(LCS) R4145713-1 11/06/24 10:09 • (LCSD) R4145713-2 11/06/24 10:26

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 %
Anthracene	0.00200	0.00209	0.00203	104	102	67.0-150			2.91	20
Acenaphthene	0.00200	0.00197	0.00194	98.5	97.0	65.0-138			1.53	20
Acenaphthylene	0.00200	0.00214	0.00209	107	104	66.0-140			2.36	20
Benzo(a)anthracene	0.00200	0.00206	0.00193	103	96.5	61.0-140			6.52	20
Benzo(a)pyrene	0.00200	0.00177	0.00166	88.5	83.0	60.0-143			6.41	20
Benzo(b)fluoranthene	0.00200	0.00196	0.00179	98.0	89.5	58.0-141			9.07	20
Benzo(g,h,i)perylene	0.00200	0.00170	0.00161	85.0	80.5	52.0-153			5.44	20
Benzo(k)fluoranthene	0.00200	0.00180	0.00162	90.0	81.0	58.0-148			10.5	20
Chrysene	0.00200	0.00204	0.00197	102	98.5	64.0-144			3.49	20
Dibenz(a,h)anthracene	0.00200	0.00172	0.00159	86.0	79.5	52.0-155			7.85	20
Fluoranthene	0.00200	0.00217	0.00209	108	104	69.0-153			3.76	20
Fluorene	0.00200	0.00215	0.00208	107	104	64.0-136			3.31	20

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

(LCS) R4145713-1 11/06/24 10:09 • (LCSD) R4145713-2 11/06/24 10:26

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Indeno(1,2,3-cd)pyrene	0.00200	0.00166	0.00159	83.0	79.5	54.0-153			4.31	20
Naphthalene	0.00200	0.00211	0.00210	105	105	61.0-137			0.475	20
Phenanthrene	0.00200	0.00210	0.00206	105	103	62.0-137			1.92	20
Pyrene	0.00200	0.00207	0.00206	104	103	60.0-142			0.484	20
1-Methylnaphthalene	0.00200	0.00217	0.00215	108	107	66.0-142			0.926	20
2-Methylnaphthalene	0.00200	0.00212	0.00208	106	104	62.0-136			1.90	20
<i>(S) Nitrobenzene-d5</i>				114	112	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				118	114	48.0-148				
<i>(S) p-Terphenyl-d14</i>				103	99.5	37.0-146				

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

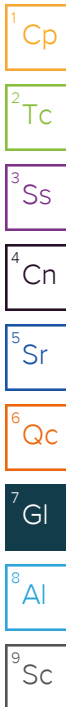
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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.
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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.



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 ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	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 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* 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.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address:
7-11 Stantec - Anchorage, AK
 725 E Fireweed Lane
 Suite 200
 Anchorage, AK 99503

Billing Information:
 Attn Paula Sime
 PO Box 711 - Loc. 0148
 Dallas, TX 75221

Pres Chk																				
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Chain of Custody Page 1 of 1



MT JULIET, TN

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: <https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Report to:
Ms. Sydney Souza

Email To: craig.cothron@pacelabs.com

Project Description:
Store 5314

City/State
 Collected: **Wasilla, AK**

Please Circle:
 PT MT CT ET
 AK

Phone: **907-266-1108**

Client Project #
203723698
 WO 1134780

Lab Project #
STAAAKSSA-5314

Collected by (print):
Zem Malenfant

Site/Facility ID #
TNS 76

P.O. #
2037 23698

Collected by (signature):

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

Quote #
Standard

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	AK101 40mlAmb HCl	AK102 100ml Amb HCl	NAICP 250mlHDPE-HNO3	PAHSIMLVID 40mlAmb-NoPres-WT	V524 40mlAmb-AscAcid+HCl	V8260C 40mlAmb-HCl	V8260C 40mlAmb-HCl-Blk
MW-1	G	GW	-	10/25/24	1257	11	X	X	X	X		X	
MW-2		GW	-		0943	11	X	X	X	X		X	
MW-3		GW	-		1026	11	X	X	X	X		X	
MW-4		GW	-		1206	11	X	X	X	X		X	
RW19-1		GW	-		1156	11	X	X	X	X		X	
Duplicate #1		GW	-		-	11	X	X	X	X		X	
		GW	-		-	11	X	X	X	X		X	
Cameron - 7		DW	-		1001	3					X		
TRIP BLANK		GW	-		-	1						X	
Trip Blank		GW	-		-	1					X		

SDG # **E175**

Acctnum: **STAAAKSSA**
 Template: **T260583**
 Prelogin: **P1102896**
 PM: **034 - Craig Cothron**
 PB: **9.18.24 BK**
 Shipped Via: **FedEX 2nd Day**

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

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 UPS FedEx Courier _____
 Tracking # **4041 0484 2356**

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

Relinquished by: (Signature)

Date: **10/29/24**
 Time: **1012**

Received by: (Signature)
 Trip Blank Received: Yes No
 HCl MeOH TBR

Temp: **MSA PC**
05+0.3=08 69

If preservation required by Login: Date/Time
NE 10/30/24

Relinquished by: (Signature)

Date: _____
 Time: _____

Received for lab by: (Signature)
17

Date: **10-30-24**
 Time: _____

Hold: _____
 Condition: NCF OK



10/30 NCF-L1794032 STAAAKSSA

R5

Time estimate: oh

Time spent: oh

Members

-  Nicolle Faulk (responsible)
-  Craig Cothron

Due on 5 November 2024 5:00 PM for target Done

- Login Clarification needed
- Chain of custody is incomplete
- Please specify Metals requested
- Please specify TCLP requested
- Received additional samples not listed on COC
- Sample IDs on containers do not match IDs on COC
- Client did not "X" analysis
- Chain of Custody is missing
- If no COC: Received by: _____
- If no COC: Date/Time: _____
- If no COC: Temp./Cont.Rec./pH: _____
- If no COC: Carrier: _____
- If no COC: Tracking #: _____
- Client informed by call
- Client informed by Email
- Client informed by Voicemail
- Date/Time: 11/5/24 0900 _____
- PM initials: cc _____
- Client Contact: Sydney Souza

Comments

- Nicolle Faulk* *30 October 2024 2:53 PM*
Received ID: "Wetland" not listed on COC. same 11 containers as the others
- Nicolle Faulk* *5 November 2024 7:33 AM*
any word?
- Craig Cothron* *5 November 2024 9:09 AM*
Log Wetland for same analysis as other samples
- Nicolle Faulk* *5 November 2024 9:15 AM*
done

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Remi Malenfant	CS Site Name:	5314 / TNS 76	Lab Name:	Pace Analytical
Title:	Environmental Geologist	ADEC File No.:	100.26.159	Lab Report No.:	L1794032
Consulting Firm:	Stantec Consulting Services Inc.	Hazard ID No.:	26295	Lab Report Date:	11/14/24

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

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
Yes No N/A
Comments: Click or tap here to enter text.
- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
Yes No N/A
Comments: Samples were not transferred

2. Chain of Custody (CoC)

- a. Is the CoC information completed, signed, and dated (including released/received by)?
Yes No N/A
Comments: Click or tap here to enter text.
- b. Were the correct analyses requested?
Yes No N/A
Analyses requested: AK101, AK102, 8260C, 8270D-SIM, NaICP
Comments: Click or tap here to enter text.

3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes No N/A
Cooler temperature(s): 0.8° C
Sample temperature(s): Click or tap here to enter text.

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

Comments: Click or tap here to enter text.

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes No N/A

Comments: Click or tap here to enter text.

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

Yes No N/A

Comments: Click or tap here to enter text.

- 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, canister not holding a vacuum, etc.?

Yes No N/A

Comments: No discrepancies

- e. Is the data quality or usability affected?

Yes No N/A

Comments: Click or tap here to enter text.

4. Case Narrative

- a. Is the case narrative present and understandable?

Yes No N/A

Comments: Click or tap here to enter text.

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes No N/A

Comments: None noted “unless noted otherwise in report”

- c. Were all the corrective actions documented?

Yes No N/A

Comments: Click or tap here to enter text.

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

Comments: No effect on data quality/usability

5. Sample Results

- a. Are the correct analyses performed/reported as requested on CoC?

Yes No N/A

Comments: Click or tap here to enter text.

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

b. Are all applicable holding times met?

Yes No N/A

Comments: VOCs in MW-3 reanalyzed outside of hold times due to surrogate failure

c. Are all soils reported on a dry weight basis?

Yes No N/A

Comments: No soils

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?

Yes No N/A

Comments: Click or tap here to enter text.

e. Is the data quality or usability affected?

Yes No N/A

Comments: Both preliminary and re-analyzed results reported in MW-3. Higher results included in quarterly report

6. QC Samples

a. Method Blank

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

Yes No N/A

Comments: Click or tap here to enter text.

ii. Are all method blank results less than LOQ (or RL)?

Yes No

Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?

Comments: AK101 GRO in all samples

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

Yes No N/A

Comments: Click or tap here to enter text.

v. Data quality or usability affected?

Yes No N/A

Comments: DRO well below GCLs in all samples

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

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

- i. Organics – Are 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: Click or tap here to enter text.

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

Yes No N/A

Comments: Click or tap here to enter text.

- iii. Accuracy – Are 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: Click or tap here to enter text.

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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: Click or tap here to enter text.

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

Comments: N/A

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

Yes No N/A

Comments: Click or tap here to enter text.

- vii. Is the data quality or usability affected?

Yes No N/A

Comments: Click or tap here to enter text.

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

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

Yes No N/A

Comments: Click or tap here to enter text.

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

- ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes No N/A
Comments: Click or tap here to enter text.
 - iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes No N/A
Comments: Click or tap here to enter text.
 - iv. Precision – Are 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: Click or tap here to enter text.
 - v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: N/A
 - vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes No N/A
Comments: Click or tap here to enter text.
 - vii. Is the data quality or usability affected?
Yes No N/A
Comments: Click or tap here to enter text.
- 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: Click or tap here to enter text.
 - ii. Accuracy – Are 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: Surrogate failure for 8260 in MW-3
 - iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

Yes No N/A

Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?

Yes No N/A

Comments: field duplicate precision calculations suggest high variability

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes No N/A

Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?

Yes No N/A

Comments: Click or tap here to enter text.

iii. If above LoQ or RL, what samples are affected?

Comments: Click or tap here to enter text.

iv. Is the data quality or usability affected?

Yes No N/A

Comments: Click or tap here to enter text.

f. Field Duplicate

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

Yes No N/A

Comments: Click or tap here to enter text.

ii. Was the duplicate submitted blind to lab?

Yes No N/A

Comments: Click or tap here to enter text.

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

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No N/A

CS Site Name: 5314 / TNS 76

Lab Report No.: L1794032

Comments: Outside by large margin for ethylbenzene, xylenes, and TMBs

iv. Is the data quality or usability affected? (Explain)

Yes No N/A

Comments: Click or tap here to enter text.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?

Yes No N/A

Comments: Click or tap here to enter text.

ii. Are all results less than LoQ or RL?

Yes No N/A

Comments: Click or tap here to enter text.

iii. If above LoQ or RL, specify what samples are affected.

Comments: Click or tap here to enter text.

iv. Are data quality or usability affected?

Yes No N/A

Comments: Click or tap here to enter text.

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

a. Are they defined and appropriate?

Yes No N/A

Comments: Click or tap here to enter text.