

**Technical Memorandum for the
Installation of Confirmation Soil Borings**

MPC Site #157575

TNS 101/IFC

ADEC File #: 100.26.022

November 13, 2023



AUTHORIZATION TO SUBMIT TECHNICAL MEMORANDUM

Stantec has been authorized by the client, Tesoro Refining & Marketing Company LLC (Tesoro) c/o Marathon Petroleum Company LP (MPC) (representative Eric Swaisgood, Advanced HES Professional, ES&S-Waste and Remediation) to submit the enclosed Technical Memorandum for Installation of Confirmation Soil Borings in September 2023 to the Alaska Department of Environmental Conservation (Attn: Pete Campbell, PE). If you have any questions or need additional information concerning this technical memorandum, please contact me at (907) 227-9883 or via email at bob.gilfilian@stantec.com.

Regards,

STANTEC CONSULTING SERVICES, INC.

Robert (Bob) Gilfilian, P.E.

Project Technical Lead

Principal Senior Civil Engineer

To: Eric M. Swaisgood,
Advanced Environmental Specialist,
Corporate ESS&PQ

Marathon Petroleum Company
539 South Main Street
Findlay, Ohio 45840

File: ADEC Facility ID #2960;
ADEC File #100.26.022

From: Bob Gilfilian, PE
Principal Senior Engineer

Sydney Souza
Environmental Geologist

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725 E Fireweed Lane, Suite 200
Anchorage, Alaska 99503

Date: November 13, 2023

Reference: Installation of Confirmation Soil Borings Completed at former Tesoro North Store (TNS) 101/IFC located at 3569 South Cushman Street, Fairbanks, Alaska

1 INTRODUCTION

On behalf of Tesoro Refining & Marketing Company (Tesoro) c/o Marathon Petroleum Company (MPC), Stantec Consulting Inc. (Stantec) is pleased to submit this Technical Memorandum (TM) for the September 2023 completion of 6 confirmation soil borings (CSBs); CSB-2023-1, CSB-2023-2, CSB-2023-3, CSB-2023-4, CSB-2023-5, and CSB-2023-6. The soil borings were collected at 7-Eleven Store #43004 (former Speedway #5313 TNS 101 IFC) and Crowley Property (former IFC site) located at 3569 South Cushman Street in Fairbanks, Alaska (**Figure 1**).

This TM describes the implementation of the 2023 work plan for the installation of CSBs that were proposed in Task 3 of the Corrective Action Work Plan (CAP) dated May 1, 2023, and were subsequently approved by Pete Campbell, PE, with the Alaska Department of Environmental Conservation (ADEC). Task 3 proposes the drilling of six confirmation soil borings. This TM also describes the results of the analytical sampling of the soil collected from the CSBs. Upon MPC's acceptance of this TM, Stantec will submit the TM to the ADEC, attention Pete Campbell.

2 BACKGROUND

The Stantec field staff consisted of Bob Gilfilian, PE, (Principal Civil Engineer), Sydney Souza (Environmental Geologist), and Leslie Petre, EIT (Staff Engineer). On September 21, 2023, Stantec met the field crew for Discovery Drilling on the Crowley property and conducted a site safety tailgate meeting. Stantec explained the scope of work that was to be completed on the Crowley property and the adjoining Speedway store property. All Stantec staff remained on-site during the drilling. Sydney Souza logged the soil borings and collect representative soil samples. Bob Gilfilian took swing tie measurements of the CSB locations while Leslie Petre collected GPS locations of each CSB. Stantec staff did not detect free product in any of the boreholes.

The intent of the CSBs were to determine the extent and characteristics of residual (if any) petroleum contamination associated with the original release for petroleum fuel that occurred on former Interior Fuel Company (IFC) property that is currently owned by Crowley. Five of the six soil borings were located as close as practical to existing Crowley warehouse/garage (**Figure 2**). The remaining soil boring was located on the Speedway site just south of the gate for the active on-site free product capture and groundwater remediation system in the northeast portion of the Speedway property (**Figure 2**). Some of the CSBs positions were adjusted to allow adequate clearance of underground utilities found in the area around the proposed soil borings. The buried utilities were located by public utility companies (811 Dig Line). Upon receipt of the findings of the buried utility locates, Stantec directed Discovery Drilling Inc. to the desired positions for the placement of the CSBs.

The approved work plan for this scope of work included field screening of soil samples collected in the micro-cores from the direct push sampling probes. Representative soil samples were selected from the borings based on field screening measurements and physical (olfactory and visual) features and placed in laboratory supplied jars for subsequent analyses by the laboratory. Representative soil samples were field screened with a calibrated photoionization detector (PID) and analyzed by an ADEC qualified laboratory for gasoline range organics (GRO), diesel range organics (DRO), polynuclear aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs). Summaries of analytical results from these soil samples are included in **Table 1**.

3 SOIL BORING AND SAMPLING METHODOLOGY

Drilling and sampling for the September 2023 confirmation soil boring was completed by Discovery Drilling, Inc. with a direct push Geoprobe® 7822 DT drilling rig. Before drilling occurred, a HydroVAC Pro truck used an air wand hooked to a compressor to remove the first 6 feet of gravel fill above the drilling location. That fill was field screened using a PID. Sampling was conducted by Stantec staff. A summary of field boring notes from soil borings CSB-2023-1, CSB-2023-2, CSB-2023-3, CSB-2023-4, CSB-2023-5, and CSB-2023-6 is provided below. See **Attachment 1** for more detailed soil boring logs. See **Figure 2** for boring log locations and **Attachment 2** for sampling photos.

- **CSB-2023-1** – As shown on **Figure 2** this CSB is located 76’ south of the corner of the east wall of the Tesoro TNS 101 store. It is 41’ straight north of the fence separation TNS 101 from Crowley property.
 - No petroleum odor was detected in the removed gravel fill and field screening with the PID returned 3.6 parts per million (ppmv).
 - From 6 to 7 feet bgs the core returned poorly graded sand with trace silt. The half foot below this sand was a layer of organic silt and damp silt. No petroleum odor was detected.
 - From 7.5 to 9.1 feet bgs, the core returned organic silt with trace fine grained sand. In this organic silt were roots, grasses, and leaves. No petroleum odor was detected.
 - The water table was encountered at 9 feet bgs. Just above the water table from 8 to 9 feet bgs the PID measured 7.0 ppmv. From 10 to 11 feet bgs the PID measured 4.5 ppmv.
 - From 9.1 to 11 feet bgs, drilling proceeded through moist grey silt with trace fine grained sand. No petroleum odor was detected. Sample CBS-2023-1A was taken from 9.5 to 10.5 feet bgs, with a PID reading of 7.0 ppmv. A duplicate sample (DUP 1) was also collected.
 - From 11 to 15 feet bgs the core returned moist gray poorly graded sand with few silt and a thin zone of sand with gravel. No petroleum odor was noted. Sample CSB-2023-1B was taken from 14 to 15 feet bgs with a PID reading of 11.0 ppmv.
 - Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill and topped with asphalt.
- **CSB-2023-2** – As shown on **Figure 2** this CSB is located 51’ south of the southwest corner of the Crowley garage, on the east side of the fence separating TNS 101 and Crowley property.
 - No petroleum odor was detected in the removed gravel fill and field screening with the PID returned 0.0 parts per million (ppmv).
 - From 6 to 15 feet bgs, drilling proceeded through grey, poorly graded sand with few silt and trace gravel.
 - Sample CBS-2023-2A was taken from 10 to 11 feet bgs, with a PID reading of 0.0 ppmv.

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Reference: **Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)**

- Sections of poorly graded sand with little gravel and no silt were found from 11.5 to 12.3 feet bgs and 13.9 to 15 feet bgs. No petroleum odor was detected within this borehole.
 - The water table was encountered at 9 feet bgs. A field screening sample from 8 to 9 feet bgs, just above the water table, read 0.0 ppmv. Just below the water table the PID also measured 0.0 ppmv.
 - Sample CBS-2023-2B was taken from 14 to 15 feet bgs, with a PID reading of 0.0 ppmv.
 - Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill.
- **CSB-2023-3** – Located 51' south of the southeast corner of the Crowley garage, 51' from the CSB-2023-2.
 - No petroleum odor was detected in the removed gravel fill (0 to 6.2 feet bgs) and field screening with the PID returned 2.8 parts per million (ppmv).
 - From 6.2 to 7 feet bgs, drilling proceeded through moist, brown, poorly graded sand with trace silt and gravel and a gravel lense. Organic grasses, leaves, and wood were also noted. No petroleum odor was detected.
 - From 7 to 12.9 feet bgs, drilling proceeded through wet, brown, poorly graded sand with few fine to coarse gravel and trace silt. No petroleum odor was detected.
 - Sample CBS-2023-3A was taken from 10 to 11 feet bgs, with a PID reading of 0.2 ppmv.
 - The water table was encountered at 9 feet bgs. The PID reading taken above the water table read 0.0 ppmv. The PID reading taken below the water table read 0.2 ppmv.
 - From 12.9 to 15 feet bgs, the core returned grey poorly graded sand with trace silt. A field screening sample taken from 14 to 105feet bgs read 0.2 ppmv. No petroleum odor was detected.
 - Sample CBS-2023-3B was taken from 14 to 15 feet bgs, with a PID reading of 0.2 ppmv.
 - Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill.
- **CSB-2023-4** – Located 78' southeast of the southeast corner of the Crowley garage, 81' east of CSB-2023-3.
 - No petroleum odor was detected in the removed gravel fill and field screening with the PID returned 1.5 parts per million (ppmv).
 - From 6 to 12.7 feet bgs, drilling proceeded through wet, brown, poorly graded sand with areas of trace to little silt. Iron staining was noted in the top foot of the core. No petroleum odor was detected.
 - Sample CBS-2023-4A was taken from 9.5 to 10.5 feet bgs, with a PID reading of 0.0 ppmv.
 - The water table was observed at 9 feet bgs. The PID reading taken just above the water table read 0.1 ppmv. The PID reading taken below the water table read 0.0 ppmv.
 - From 12.7 to 13.8 feet bgs, the core returned wet, grey gravel with few fine to coarse sand. No petroleum odor was detected.

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Reference: **Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)**

- From 13.8 to 15 feet bgs, drilling proceeded through wet, grey poorly graded gravel with little fine subangular gravel. No petroleum odor was detected.
- Sample CBS-2023-4B was taken from 14 to 15 feet bgs, with a PID reading of 0.0 ppmv.
- Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill.
- CSB-2023-5 – Located 75' east of the east wall of the Crowley garage, 69' north of CSB-2023-4 and 51' south of CSB-2023-6.
 - Slight detection of diesel odor was noted in the removed gravel fill from the vacuum truck. The soil was field screened with the PID and measured 75.3 parts per million (ppmv). Soil from the vacuum truck was containerized in a steel drum and stored in the fenced area of TNS 101. It was subsequently sampled. Test results are listed in **Table 2**. The soil is below soil cleanup levels (SCLs).
 - From 6 to 6.9 feet bgs, drilling proceeded through grey silt and organic silt with leaves and grasses. No petroleum odor was detected, however the PID reading was 73.9 ppmv.
 - From 6.9 to 12.8 feet bgs, drilling proceeded through wet, grey, and brown poorly graded sand with silt lenses. No petroleum odor was detected.
 - Sample CBS-2023-5A was taken from 10 to 11 feet bgs, with a PID reading of 0.0 ppmv.
 - The water table was observed at 9 feet bgs. The PID reading above the water table was 0.2 ppmv. The PID reading below the water table was 0.0 ppmv.
 - From 12.8 to 15 feet bgs the core returned wet, grey poorly graded sand with some gravel and trace organics. No petroleum odor was detected. A field screening sample taken from 14 to 15 feet bgs read 0.4 ppmv.
 - Sample CBS-2023-5B was taken from 14 to 15 feet bgs, with a PID reading of 0.4 ppmv.
 - Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill.
- CSB-2023-6 – Located 76' east of the northeast corner of the Crowley garage, 51' north of CSB-2023-5.
 - No petroleum odor was detected in the removed gravel fill and field screening with the PID returned 6.1 parts per million (ppmv).
 - From 6 to 7.8 feet bgs, drilling proceeded through dry, grey silt. No petroleum odor was detected.
 - From 7.8 to 8.6 feet bgs, drilling proceeded through dry, grey organic silt with few fine sand. The organics included leaves and grasses. No petroleum odor was detected.
 - From 8.6 to 10.4 feet bgs, the core returned dry, grey poorly graded sand with little silt lenses throughout. No petroleum odor was detected. A field screening sample taken from 8 to 9 feet bgs read 1.7 ppmv.
 - Sample CBS-2023-6A was taken from 10 to 11 feet bgs, with a PID reading of 0.7 ppmv.
 - The water table was observed at 9 feet bgs. A field screening sample taken just above the water table read 1.7 ppmv. A field screening sample taken just below the water table read 0.7 ppmv.

Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)

- From 10.4 to 11.1 feet bgs, the core returned the same organic silt layer as previously seen.
- From 11.1 to 15 feet bgs, drilling proceeded through wet, grey, poorly graded sand with trace silt which showed more gravel closer to 15 feet bgs. No petroleum odor was detected.
- Sample CBS-2023-6B was taken from 14 to 15 feet bgs, with a PID reading of 0.2 ppmv.
- Drilling ended at 15 feet bgs. The hole was backfilled with gravel fill.

3.1 FIELD SCREENING METHODOLOGY AND RESULTS

Field screening head space samples were collected from each soil sample extracted during the geotechnical investigation. A portion of each soil sample, collected with macro core by direct push, was transferred to a re-sealable polyethylene bag for screening by PID. Calibration of the PID was conducted with a 100-ppmv calibration standard. Samples were warmed inside the company vehicle and allowed to volatilize for several minutes prior to screening. Field screening results along with the location of analytical sample locations are summarized on the six soil boring logs that are provided in **Attachment 1**.

3.1.1 Analytical Sampling Methodology and Results

Soil analytical samples were submitted to Pace Analytical Laboratory located in Mount Juliet, Tennessee for analysis of the Alaska list of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260D, the standard list of polynuclear aromatic hydrocarbons (PAHs), to include naphthalene, by EPA Method 8270D with selective ion monitoring (SIM), gasoline range organics (GRO) by Alaska State test method (AK) 101, diesel range organics (DRO) by AK102, total solids by method 2540 G-2011, and total lead by EPA 6020. The laboratory analytical report is provided in **Attachment 3**. It has been noted within the analytical report that the names of the samples given to the laboratory are incorrect. The correct names have been provided on the report and are listed below for reference.

Sample Name on Lab Report	Correct Sample Name
Speedway 2023-1	CSB-2023-1
Crowley 2023-1	CSB-2023-2
Crowley 2023-2	CSB-2023-3
Crowley 2023-3	CSB-2023-4
Crowley 2023-4	CSB-2023-5
Crowley 2023-5	CSB-2023-6

One grab sample from CSB-2023-5 was taken from soil that had been containerized. These results have been added to the bottom of **Table 1**. This grab sample was taken on October 18, 2023. The containerized soil has remained on site for the purpose of sampling. Lab results are provided in **Attachment 3**.

Soil analytical results were compared to 18 Alaska Administrative Code (AAC) 75 Method Two Migration-to-Groundwater SCLs. A summary of soil analytical detections and exceedances are provided in **Table 1**. No contaminants were detected in exceedance of SCLs in any samples.

Table 1 : Soil Sample Analytical Results

Samples collected September 21, 2023

Sample ID	PID (ppmv)	Benzene ¹ (mg/kg)	Toluene ¹ (mg/kg)	Ethylbenzene ¹ (mg/kg)	Total Xylenes ¹ (mg/kg)	DRO (mg/kg)	GRO (mg/kg)	Naphthalene ² (mg/kg)	Lead (mg/kg)
CSB-2023-1A	7.0	0.00112 J	0.00855	U(0.00417)	0.00213 J	U(200)	U(38.0)	U(0.0267)	6.97
DUP 1 (of 1A)	-	U(0.00260)	0.00843 J	U(0.00649)	U(0.0169)	U(223)	U(118)	U(0.0297)	12.4
CSB-2023-1B	11.0	0.00225	0.00259 J	0.00304 J	0.00194 J	U(192)	U(3.55)	U(0.0256)	3.30
CSB-2023-2A	0.0	0.000886 J	0.00289 J	U(0.00382)	U(0.00993)	U(187)	1.23 B J	U(0.0249)	3.75
CSB-2023-2B	0.0	0.00742	0.0186	0.00692	0.0428	U(164)	U(2.82)	U(0.0218)	2.54
CSB-2023-3A	0.2	U(0.00164)	U(0.00818)	U(0.00409)	U(0.0106)	U(193)	U(3.29)	U(0.0258)	3.97
CSB-2023-3B	0.2	U(0.00152)	0.00304 J	U(0.00379)	U(0.00987)	U(186)	7.37 B	U(0.0248)	2.39 J
CSB-2023-4A	0.0	U(0.00156)	0.00343 J	U(0.00390)	0.00156 J	U(192)	U(12.8)	U(0.0256)	5.75
CSB-2023-4B	0.0	U(0.00144)	0.00602 J	U(0.00360)	0.00472 J	U(181)	U(3.07)	U(0.0241)	2.61
CSB-2023-5A	0.0	U(0.00158)	0.00281 J	U(0.00395)	U(0.0103)	U(190)	U(3.27)	U(0.0254)	6.92
DUP 2 (of 5A)	-	U(0.00165)	U(0.00827)	U(0.00414)	U(0.0108)	U(195)	U(3.29)	U(0.0260)	5.45
CSB-2023-5B	0.4	U(0.00123)	0.00254 J	U(0.00309)	U(0.00802)	U(165)	1.17 B J	U(0.0220)	2.43
CSB-2023-6A	0.7	U(0.00160)	0.00342 J	U(0.00400)	U(0.0104)	U(192)	U(12.9)	U(0.0256)	9.49
CSB-2023-6B	0.2	U(0.00116)	0.00470 J	U(0.00290)	0.00145 J	U(162)	U(2.70)	U(0.0216)	3.22
CSB-2023-5 (6ft) ³	75.3	U(0.00118)	0.00224 J	0.00344	0.0231	U(163)	3.33 B	0.00676 J	6.41
SCL	-	0.022	6.7	0.13	1.5	250	300	0.038	400

- ¹ Analyzed by US Environmental Protection Agency Test Method 8260D
- ² Analyzed by US Environmental Protection Agency Test Method 8270D
- ³ Sample taken October 18, 2023, from containerized material
- J The identification of the analyte is acceptable; the reported value is an estimate.
- B The same analyte is found in the associated blank.
- SCL Soil Cleanup Levels from 18 AAC 75, measured in mg/kg
- Bold** Indicates the listed value exceeds the associated Soil Cleanup Level for that contaminant.
- DRO Diesel Range Organics, analyzed by method AK102
- GRO Gasoline Range Organics, analyzed by AK101
- mg/kg milligrams per kilogram
- ppmv parts per million
- PID photoionization detector
- U() Indicates the sample was not detected at the Reporting Limit

3.2 ANALYTICAL SAMPLING QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

Pace Analytical did not meet all laboratory QA/QC criteria during the analysis of soil samples, as described in **Table 2** below, which provides a summary of the laboratory QC objectives and outcomes for the soil samples. To evaluate QA/QC criteria, two duplicate soil sample sets were collected to determine the precision of the field collection and laboratory analysis.

The laboratory holding times for soil samples were evaluated to determine if there were any exceedances. **Table 2** shows the precision for the duplicate sample sets for analytes that were detected above the SCLs, and the relative percent differences (RPDs) could be calculated (RPDs could not be calculated for analytes that were non-detect in one or both

primary and duplicate samples). Laboratory QC data and the ADEC Laboratory Data Review Checklist are included after the laboratory report in **Attachment 3**. Pace analytical met all QC requirements for all holding times.

For the soil sample CSB-2023-1A and its duplicate sample, the tolerance for lead exceeded the SCL. Most tolerances were not calculated due to the results coming back as non-detect. All holding times were within established QA criteria.

Table 2 Laboratory Quality Control Objectives

Field Duplicate – Precision (Excavated Soil)			
Quality Control Designation	Tolerance	Results for Duplicate 1	Results from Duplicate 2
Benzene/Soil	± 50%	NC	NC
Toluene/Soil	± 50%	1.4%	NC
Ethylbenzene/Soil	± 50%	NC	NC
Total Xylenes/Soil	± 50%	NC	NC
DRO/Soil	± 50%	NC	NC
GRO/Soil	± 50%	NC	NC
Lead/Soil	± 50%	56%	23.8%
Naphthalene/Soil	± 50%	NC	NC
Holding Times			
DRO/Soil/to analyze	40 days	14 days	15 days
GRO/Soil/to analyze	14 days	12 days	12 days
VOCs/Soil/to analyze	14 days	10 days	10 days
PAH/Soil/to analyze	40 days	13 days	13 days

Key:

- NC Not calculated, the analyte was not detected above the practical quantitation limit in one or more samples.
- DRO Diesel Range Organics
- GRO Gasoline Range Organics
- PAH Polynuclear Aromatic Hydrocarbon
- VOC Volatile Organic Compound
- BOLD** Indicates the listed value exceeds the associated tolerance for that contaminant.

4 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report was to provide, on behalf of Tesoro North Store, a summary of the field and laboratory data collected during the September 2023 drilling of the six confirmation soil borings (CSB-2023-1/2/3/4/5/6) at the subject site (Tesoro North Store 101 and adjoining IFC property, currently owned by Crowley). As presented in Table 1, no contaminants of concern were found exceeding the ADEC SQLs and that the investigation was successful in determining extent of former IFC release.

Please feel free to contact me if you have any questions regarding the findings reported herein.



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Attachments:

Figure 1 – Location and Vicinity Map
Figure 2 – Confirmation Soil Boring Locations
Attachment 1 – Confirmation Soil Boring Logs
Attachment 2 – Photo Log
Attachment 3 - ADEC Laboratory Results and Data Review Checklist

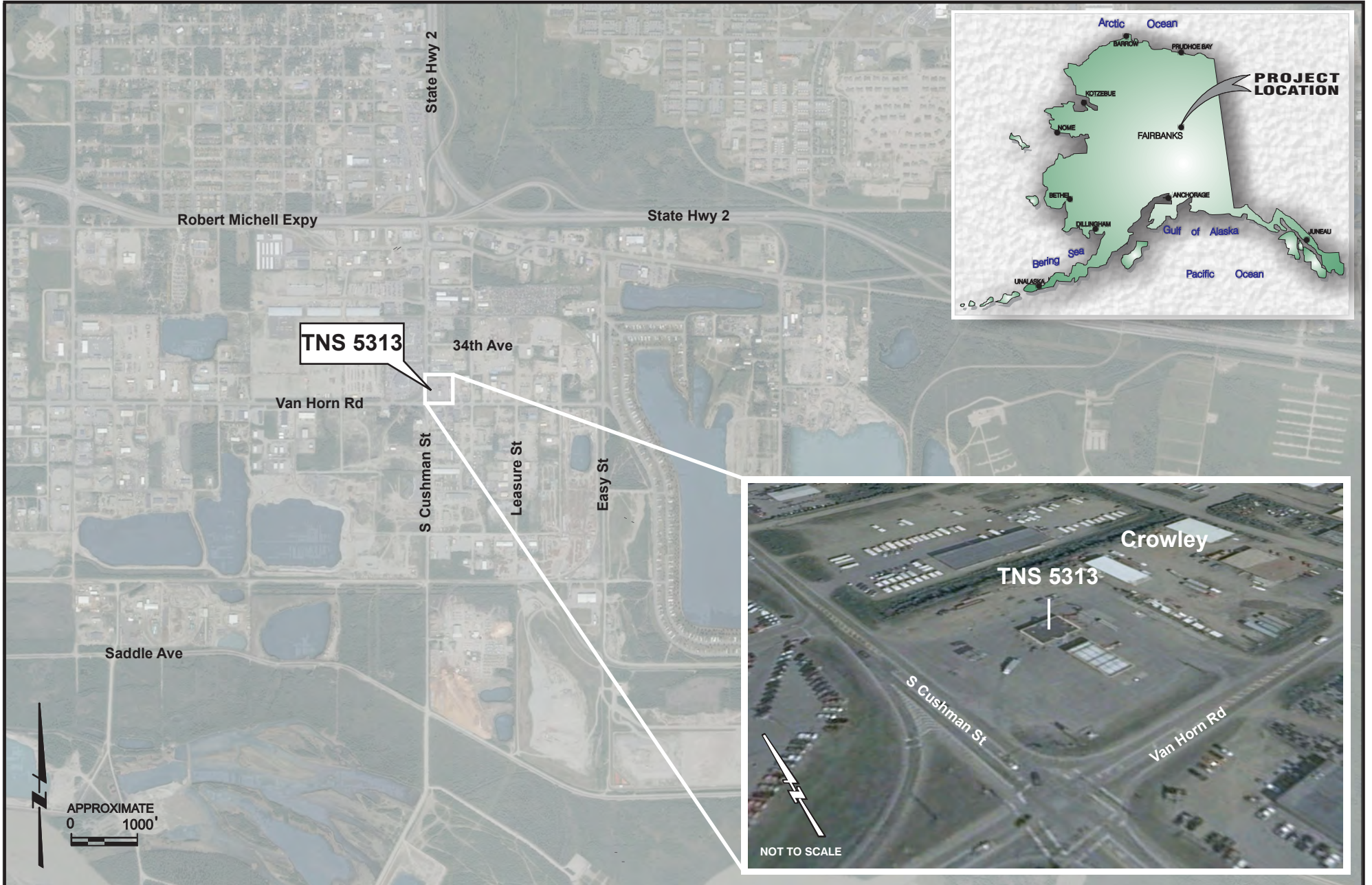
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Figure 1 Location and Vicinity Map



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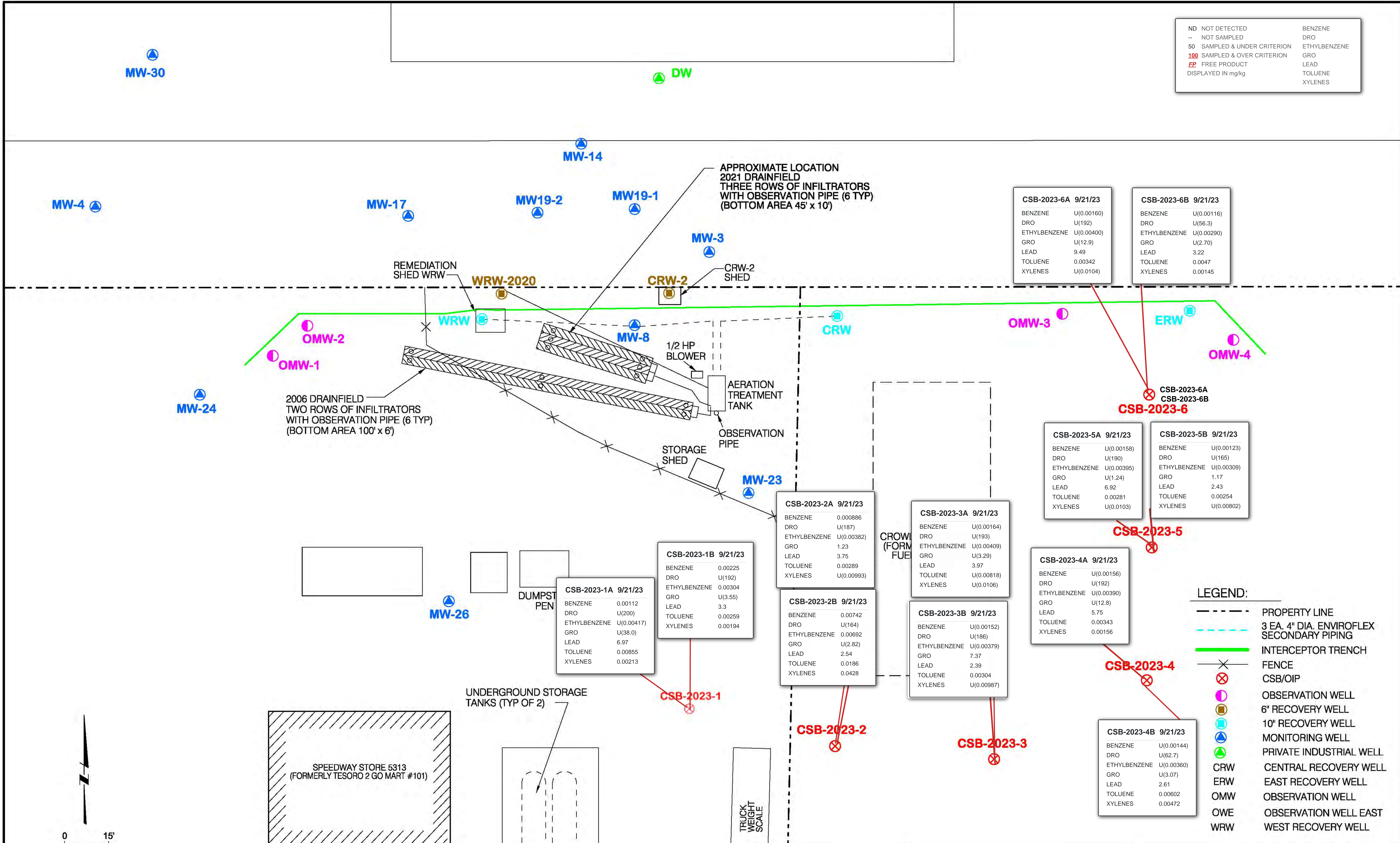
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Figure 2 Confirmation Soil Boring Locations

ND	NOT DETECTED	BENZENE
--	NOT SAMPLED	DRO
50	SAMPLED & UNDER CRITERION	ETHYLBENZENE
100	SAMPLED & OVER CRITERION	GRO
FP	FREE PRODUCT	LEAD
	DISPLAYED IN mg/kg	TOLUENE
		XYLENES



CSB-2023-6A 9/21/23

BENZENE	U(0.00160)
DRO	U(192)
ETHYLBENZENE	U(0.00400)
GRO	U(12.9)
LEAD	9.49
TOLUENE	0.00342
XYLENES	U(0.0104)

CSB-2023-6B 9/21/23

BENZENE	U(0.00116)
DRO	U(56.3)
ETHYLBENZENE	U(0.00290)
GRO	U(2.70)
LEAD	3.22
TOLUENE	0.0047
XYLENES	0.00145

CSB-2023-5A 9/21/23

BENZENE	U(0.00158)
DRO	U(190)
ETHYLBENZENE	U(0.00395)
GRO	U(1.24)
LEAD	6.92
TOLUENE	0.00281
XYLENES	U(0.0103)

CSB-2023-5B 9/21/23

BENZENE	U(0.00123)
DRO	U(165)
ETHYLBENZENE	U(0.00309)
GRO	1.17
LEAD	2.43
TOLUENE	0.00254
XYLENES	U(0.00802)

CSB-2023-2A 9/21/23

BENZENE	0.000886
DRO	U(187)
ETHYLBENZENE	U(0.00382)
GRO	1.23
LEAD	3.75
TOLUENE	0.00289
XYLENES	U(0.00993)

CSB-2023-3A 9/21/23

BENZENE	U(0.00164)
DRO	U(193)
ETHYLBENZENE	U(0.00409)
GRO	U(3.29)
LEAD	3.97
TOLUENE	U(0.00818)
XYLENES	U(0.0106)

CSB-2023-4A 9/21/23

BENZENE	U(0.00156)
DRO	U(192)
ETHYLBENZENE	U(0.00390)
GRO	U(12.8)
LEAD	5.75
TOLUENE	0.00343
XYLENES	0.00156

CSB-2023-1A 9/21/23

BENZENE	0.00112
DRO	U(200)
ETHYLBENZENE	U(0.00417)
GRO	U(38.0)
LEAD	6.97
TOLUENE	0.00855
XYLENES	0.00213

CSB-2023-1B 9/21/23

BENZENE	0.00225
DRO	U(192)
ETHYLBENZENE	0.00304
GRO	U(3.55)
LEAD	3.3
TOLUENE	0.00259
XYLENES	0.00194

CSB-2023-2B 9/21/23

BENZENE	0.00742
DRO	U(164)
ETHYLBENZENE	0.00692
GRO	U(2.82)
LEAD	2.54
TOLUENE	0.0186
XYLENES	0.0428

CSB-2023-3B 9/21/23

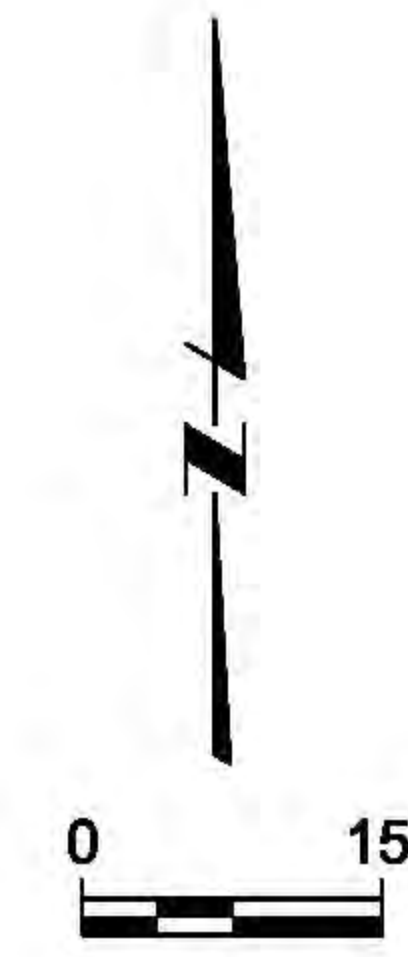
BENZENE	U(0.00152)
DRO	U(186)
ETHYLBENZENE	U(0.00379)
GRO	7.37
LEAD	2.39
TOLUENE	0.00304
XYLENES	U(0.00987)

CSB-2023-4B 9/21/23

BENZENE	U(0.00144)
DRO	U(62.7)
ETHYLBENZENE	U(0.00360)
GRO	U(3.07)
LEAD	2.61
TOLUENE	0.00602
XYLENES	0.00472

LEGEND:

- PROPERTY LINE
- - - - 3 EA. 4" DIA. ENVIROFLEX SECONDARY PIPING
- INTERCEPTOR TRENCH
- ⊗ FENCE
- ⊗ CSB/OIP
- OBSERVATION WELL
- ⊕ 6" RECOVERY WELL
- ⊕ 10" RECOVERY WELL
- ⊕ MONITORING WELL
- ⊕ PRIVATE INDUSTRIAL WELL
- ⊕ CRW CENTRAL RECOVERY WELL
- ⊕ ERW EAST RECOVERY WELL
- ⊕ OMW OBSERVATION WELL
- ⊕ OWE OBSERVATION WELL EAST
- ⊕ WRW WEST RECOVERY WELL






November 13, 2023

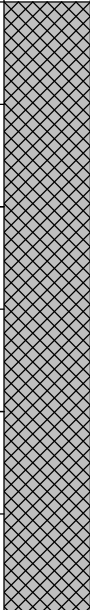
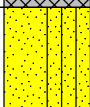


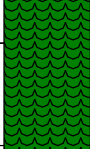
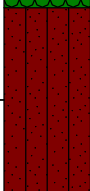
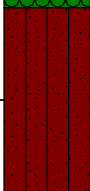


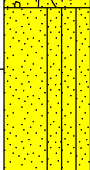
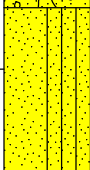
Eric M. Swaisgood, Advanced Environmental Specialist, Corporate ESS&PQ

Page 20 of 22

Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)


Attachment 1 Confirmation Soil Boring Logs

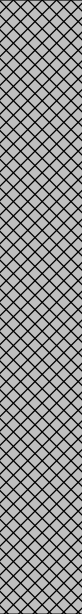
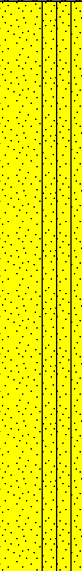





PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:	
LOCATION: Fairbanks, AK	PAGE 1 OF 1	
PROJECT NUMBER: 203723146		
DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	BOREHOLE DEPTH (ft bgs): 15
DRILLING EQUIPMENT: Geoprobe 7822DT	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING METHOD: MC5	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5
SAMPLING EQUIPMENT: GEOPROBE	LOGGED BY: Sydney Souza	CHECKED BY: Bob Gilfilian

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6			Sandy Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID					
6 - 6.5		SP-SM	POORLY GRADED SAND WITH TRACE SILT ; SP-SM; brown; fine to medium-grained; dry; no petroleum odor					2.7
6.5 - 6.8		OH	ORGANIC SILT ; OH; brown; dry; no petroleum odor					
6.8 - 7.2		ML	SILT ; ML; gray; damp; no petroleum odor					
7.2 - 8.5		OH	ORGANIC SILT WITH TRACE FINE SAND ; OH; dark brown; damp; no petroleum odor; roots, grasses, and leaves		CSB-2023-1A Collected @ 09:45, DUP 1 Collected @ 09:50	4		7.0
8.5 - 10.0		MLS	SILT WITH TRACE FINE SAND ; MLS; gray; moist; no petroleum odor					10.0
10.0 - 11.5								4.5
11.5 - 12.0		SP-SM	POORLY GRADED SAND WITH FEW SILT ; SP-SM; gray; moist; no petroleum odor					
12.0 - 12.5		SPG	POORLY GRADED SAND WITH LITTLE FINE TO MEDIUM GRAVEL AND TRACE SILT ; SPG; gray; moist; no petroleum odor					
12.5 - 14.0		SP-SM	POORLY GRADED SAND WITH FEW SILT AND TRACE FINE TO MEDIUM GRAVEL ; SP-SM; gray; moist; no petroleum odor			3.5		17.0
14.0 - 15.0					CSB-2023-1B Collected @ 10:08			11.0

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill


GEO FORM 304 10/1/FC BORING_LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/23/23

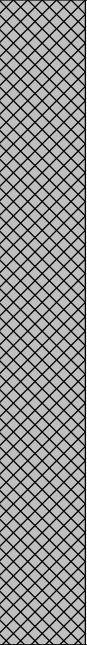




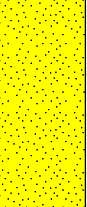
PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:	
LOCATION: Fairbanks, AK	PAGE 1 OF 1	
PROJECT NUMBER: 203723146		
DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	BOREHOLE DEPTH (ft bgs): 15
DRILLING EQUIPMENT: Geoprobe 7822DT	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING METHOD: MC5	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5
SAMPLING EQUIPMENT: GEOPROBE	LOGGED BY: Sydney Souza	CHECKED BY: Bob Gilfilian

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6			Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID				0.0	
6 - 12		SP-SM	POORLY GRADED SAND FEW SILT TRACE GRAVEL ; SP-SM; gray; fine to coarse-grained; wet; no petroleum odor			3	0.0	
12 - 14		SPG	POORLY GRADED SAND LITTLE GRAVEL ; SPG; gray; medium to coarse-grained; wet; no petroleum odor; subrounded gravel up tp 2"		CSB-2023-2A Collected @ 10:25		0.0	
14 - 15		SP-SM	POORLY GRADED SAND FEW SILT TRACE GRAVEL ; SP-SM; gray; fine to coarse-grained; moist; no petroleum odor			5	0.0	
15		SPG	POORLY GRADED SAND LITTLE GRAVEL ; SPG; gray; medium to coarse-grained; moist; no petroleum odor; subrounded gravel up tp 2"		CSB-2023-2B Collected @ 10:35		0.0	

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill


GEO FORM 304 1011FC_BORING_LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/23/23

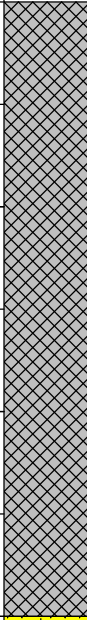
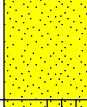
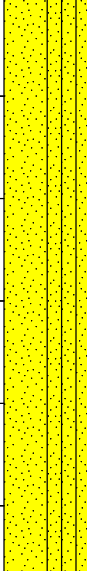
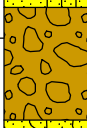
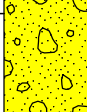
PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:		
LOCATION: Fairbanks, AK	PAGE 1 OF 1		CSB-2023-3
PROJECT NUMBER: 203723146	DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):	BOREHOLE DEPTH (ft bgs): 15
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING EQUIPMENT: Geoprobe 7822DT	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5	CHECKED BY: Bob Gilfilian
DRILLING METHOD: MC5	LOGGED BY: Sydney Souza		
SAMPLING EQUIPMENT: GEOPROBE			

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6.5			Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID					
6.5 - 7.5		SP-SM	POORLY GRADED SAND WITH TRACE SILT AND GRAVEL ; SP-SM; brown; fine to medium-grained; moist; no petroleum odor; trace organics-grasses, leaves, wood					
7.5 - 8.0		GP	GRAVEL ; GP; gray; damp; no petroleum odor; subrounded gravel up to 2"					
8.0 - 12.0		SPG	POORLY GRADED SAND FEW FINE TO COARSE GRAVEL WITH TRACE SILT ; SPG; brown; fine to medium-grained; wet; no petroleum odor; subrounded gravel up to 1"			3	0.0	
12.0 - 13.5		SPG	POORLY GRADED SAND LITTLE GRAVEL ; SPG; gray; wet; no petroleum odor; subrounded gravel up to 1"			5	0.1	
13.5 - 15.0		SP	POORLY GRADED SAND TRACE SILT ; SP; gray; fine to coarse-grained; wet; no petroleum odor					
					CSB-2023-3A Collected @ 11:15		0.2	
					CSB-2023-3B Collected @ 11:25		0.2	

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill


GEO FORM 304 10/11/FC BORING LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/23/23

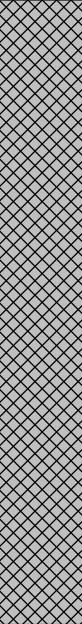



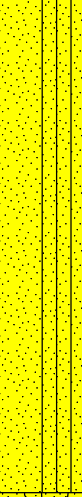

PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:	
LOCATION: Fairbanks, AK	PAGE 1 OF 1	
PROJECT NUMBER: 203723146	CSB-2023-4	
DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	BOREHOLE DEPTH (ft bgs): 15
DRILLING EQUIPMENT: Geoprobe 7822DT	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING METHOD: MC5	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5
SAMPLING EQUIPMENT: GEOPROBE	LOGGED BY: Sydney Souza	CHECKED BY: Bob Gilfilian

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6			Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID					
6 - 7		SP	POORLY GRADED SAND WITH TRACE SILT ; SP; brownish gray; fine to medium-grained; moist; no petroleum odor; Fe staining in spots (~3mm)					
7 - 13		SP-SM	POORLY GRADED SAND WITH LITTLE SILT ; SP-SM; orangeish brown; fine to medium-grained; wet; no petroleum odor			3.5	0.1	
13 - 14		GP	GRAVEL FEW FINE TO COARSE SAND ; GP; gray; wet; no petroleum odor; subrounded gravel up to 1"			5	0.1	
14 - 15		SPG	POORLY GRADED SAND WITH LITTLE FINE SUB ANGULAR GRAVEL ; SPG; gray; wet; no petroleum odor; gravel up to 0.5"		CSB-2023-4A Collected @ 12:00			
					CSB-2023-4B Collected @ 12:05			

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill


GEO FORM 304 10/11/FC BORING LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/23/23

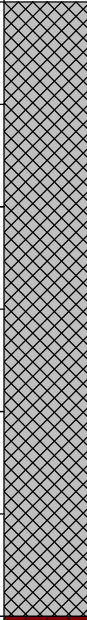


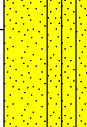
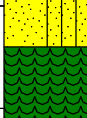
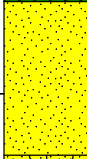

PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:		
LOCATION: Fairbanks, AK	PAGE 1 OF 1		CSB-2023-5
PROJECT NUMBER: 203723146	DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):	BOREHOLE DEPTH (ft bgs): 15
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING EQUIPMENT: Geoprobe 7822DT	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5	CHECKED BY: Bob Gilfilian
DRILLING METHOD: MC5	LOGGED BY: Sydney Souza		
SAMPLING EQUIPMENT: GEOPROBE			

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6			Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID Soil from the vacuum truck was containerized and material was subsequently sampled (grab sample). This soil had a PID reading of 75.3ppmv.				75.3	5
6 - 6.5		MLS	SILT WITH LITTLE FINE SAND AND TRACE SMALL GRAVEL ; MLS; gray; dry; no petroleum odor; silt lenses				73.9	
6.5 - 7.5		OH	ORGANIC SILT WITH FEW FINE SAND ; OH; brownish gray; dry; no petroleum odor; leave and grasses					
7.5 - 8.5		SP-SM	POORLY GRADED SAND WITH LITTLE SILT ; SP-SM; gray and brown; fine-grained; wet; no petroleum odor; brown sand lenses, gray silt lenses			4	0.2	10
8.5 - 13.5		SPG	POORLY GRADED SAND WITH SOME GRAVEL AND TRACE ORGANICS ; SPG; gray; wet; no petroleum odor; subrounded gravel up to 3"		CBS-2023-5A Collected @ 12:50, DUP 2 Collected at 12:55		0.0	10
13.5 - 14.5		SPG	POORLY GRADED SAND WITH SOME GRAVEL AND TRACE ORGANICS ; SPG; gray; wet; no petroleum odor; subrounded gravel up to 3"		CSB-2023-5B Collected @ 13:40	5	0.0	

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill

GEO FORM 304 1011FC BORING LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/23/23

PROJECT: Tesoro Northstore (TNS) 101 IFC	WELL / PROBEHOLE / BOREHOLE NO:	
LOCATION: Fairbanks, AK	PAGE 1 OF 1	
PROJECT NUMBER: 203723146		
DRILLING: STARTED 9/21/23 COMPLETED: 9/21/23	NORTHING (ft):	EASTING (ft):
INSTALLATION: STARTED COMPLETED:	GROUND ELEV (ft):	TOC ELEV (ft bgs):
DRILLING COMPANY: Discovery Drilling	INITIAL DTW (ft): 9	BOREHOLE DEPTH (ft bgs): 15
DRILLING EQUIPMENT: Geoprobe 7822DT	STATIC DTW (ft): Not Encountered	WELL DEPTH (ft bgs):
DRILLING METHOD: MC5	WELL CASING DIA. (in): ---	BOREHOLE DIA.(in): 2.5
SAMPLING EQUIPMENT: GEOPROBE	LOGGED BY: Sydney Souza	CHECKED BY: Bob Gilfilian

Depth (feet)	Graphic Log	USCS	Description	Sample Length	Soil Sample	Measured Recovery (feet)	Headspace PID (ppmv)	Depth (feet)
0 - 6			Gravel Fill Air wand hooked to compressor; break up soil; vacuumed using HydroVAC Pro; grab samples checked w/PID					
6 - 8		ML	SILT ; ML; gray; dry; no petroleum odor					
8 - 9		OH	ORGANIC SILT WITH FEW FINE SAND ; OH; gray; dry; slight organic odor; leaves and grasses			3		
9 - 10		SP-SM	POORLY GRADED SAND WITH LITTLE SILT ; SP-SM; gray; dry; no petroleum odor; silt lenses throughout				1.7	▽
10 - 11		OH	ORGANIC SILT WITH FEW FINE SAND ; OH; gray; dry; slight organic odor; leaves and grasses		CSB-2023-6A Collected @ 13:50		0.7	
11 - 12		SP	POORLY GRADED SAND WITH TRACE SILT ; SP; gray; wet; no petroleum odor					
12 - 14		SPG	POORLY GRADED SAND WITH LITTLE GRAVEL ; SPG; gray; wet; no petroleum odor; subrounded gravel up to 3"			5	0.6	
14 - 15					CSB-2023-6B Collected @ 13:55		0.2	

Borehole terminated at 15 feet.
Borehole backfilled with gravel fill

GEO FORM 304 1011FC BORING LOGS_10062023.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/25/23



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Eric M. Swaisgood, Advanced Environmental Specialist, Corporate ESS&PQ

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)

Attachment 2 Photo Log

November 13, 2023

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Reference: **Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)**



Photo 1: Macrocore sampling of CSB-2023-1 on 101IFC property.

November 13, 2023

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 2: Looking into CSB-2023-2 after the VAC truck removed the first six feet of fill.

November 13, 2023

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 3: Drillers preparing core sample for CSB-2023-2.

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Reference: **Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)**



Photo 4: Sampling of CSB-2023-6.

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 5: Preparing to drill CSB-2023-3.

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Reference: **Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)**



Photo 6: Sampling CSB-2023-4.

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 7: Drillers preparing the drill rig.

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 8: HydroVAC Pro vacuuming the gravel fill from the drill area.

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Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)



Photo 9: Wide view of the HydroVAC Pro vacuuming the gravel fill from the drill area.



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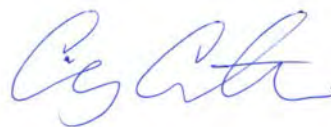
Reference: Installation of Confirmation Soil Borings Completed at Marathon Petroleum Company Site #157575 (Speedway 5313 - former TNS 101/IFC)

Attachment 3 ADEC Laboratory Results and Data Review Checklist

Stantec - Anchorage, AK

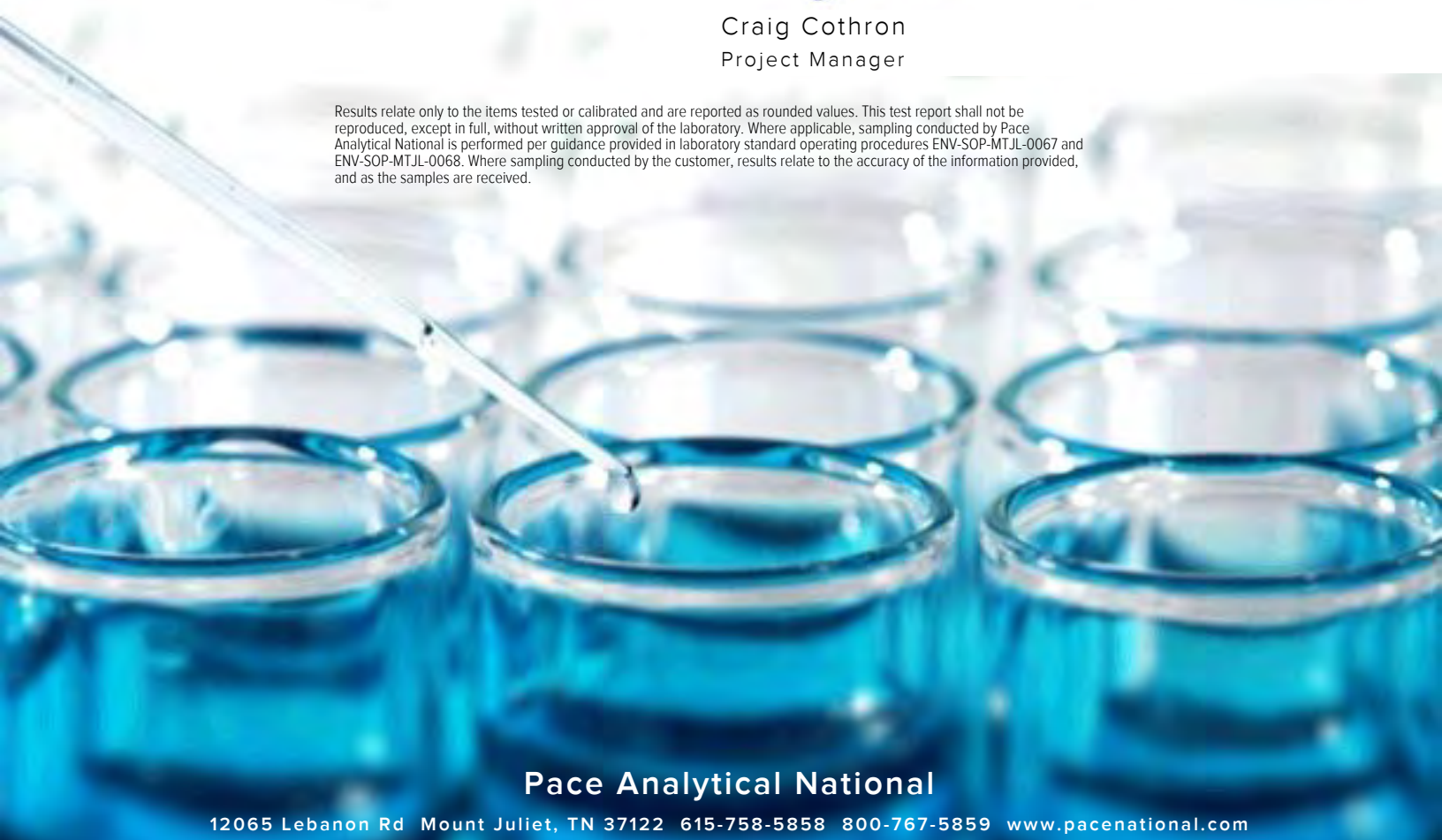
Sample Delivery Group: L1659968
Samples Received: 09/27/2023
Project Number: 203723146
Description: MPC 157575
Site: MPC157575
Report To: Ms. Leslie Petre
725 E Fireweed Lane
Suite 200
Anchorage, AK 99503

Entire Report Reviewed By:



Craig Cothron
Project Manager

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



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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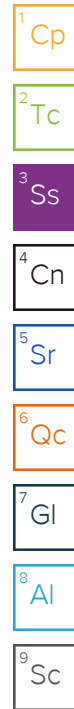
¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

CROWLEY 2023-1 L1659968-01 Solid

Collected by Leslie Petre Collected date/time 09/21/23 10:25 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141731	1	09/29/23 16:25	09/29/23 16:39	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:21	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	1.02	09/21/23 10:25	10/02/23 13:28	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 10:25	10/01/23 13:07	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 17:13	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 05:21	DSH	Mt. Juliet, TN



CROWLEY 2023-1 L1659968-02 Solid

Collected by Leslie Petre Collected date/time 09/21/23 10:35 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142830	5	10/02/23 05:52	10/03/23 19:41	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	1.03	09/21/23 10:35	10/02/23 13:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 10:35	10/01/23 13:26	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/06/23 11:39	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 05:38	DSH	Mt. Juliet, TN

CROWLEY 2023-2 L1659968-03 Solid

Collected by Leslie Petre Collected date/time 09/21/23 11:15 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:24	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	1.02	09/21/23 11:15	10/02/23 14:13	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 11:15	10/01/23 13:45	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/06/23 11:54	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 05:56	DSH	Mt. Juliet, TN

CROWLEY 2023-2 L1659968-04 Solid

Collected by Leslie Petre Collected date/time 09/21/23 11:25 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:27	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	2.02	09/21/23 11:25	10/02/23 23:23	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 11:25	10/01/23 14:04	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 18:42	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 06:13	DSH	Mt. Juliet, TN

CROWLEY 2023-3 L1659968-05 Solid

Collected by Leslie Petre Collected date/time 09/21/23 12:00 Received date/time 09/27/23 09:00

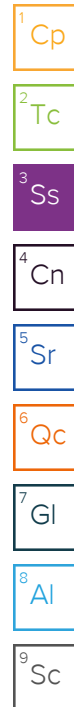
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	4	09/21/23 12:00	10/02/23 21:30	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 12:00	10/01/23 14:23	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/06/23 12:08	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 06:30	DSH	Mt. Juliet, TN

SAMPLE SUMMARY

CROWLEY 2023-3 L1659968-06 Solid

Collected by Leslie Petre Collected date/time 09/21/23 12:05 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	1.02	09/21/23 12:05	10/02/23 14:45	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 12:05	10/01/23 14:42	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 19:20	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 06:47	DSH	Mt. Juliet, TN



CROWLEY 2023-4 L1659968-07 Solid

Collected by Leslie Petre Collected date/time 09/21/23 12:50 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:45	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2142944	1.03	09/21/23 12:50	10/02/23 15:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 12:50	10/01/23 15:01	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 20:40	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 07:05	DSH	Mt. Juliet, TN

CROWLEY 2023-4 L1659968-08 Solid

Collected by Leslie Petre Collected date/time 09/21/23 13:40 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	1.02	09/21/23 13:40	10/03/23 03:15	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 13:40	10/01/23 15:20	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 19:34	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 07:22	DSH	Mt. Juliet, TN

CROWLEY 2023-5 L1659968-09 Solid

Collected by Leslie Petre Collected date/time 09/21/23 13:50 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	4.04	09/21/23 13:50	10/03/23 04:45	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 13:50	10/01/23 15:39	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 20:54	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 07:39	DSH	Mt. Juliet, TN

CROWLEY 2023-5 L1659968-10 Solid

Collected by Leslie Petre Collected date/time 09/21/23 13:55 Received date/time 09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	1	09/21/23 13:55	10/03/23 03:37	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 13:55	10/01/23 15:58	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 19:48	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2143658	1	10/03/23 18:01	10/04/23 07:56	DSH	Mt. Juliet, TN

SAMPLE SUMMARY

SPEEDWAY 2023-1 L1659968-11 Solid

Collected by
Leslie Petre

Collected date/time
09/21/23 09:45

Received date/time
09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141732	1	09/29/23 16:01	09/29/23 16:21	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	11.4	09/21/23 09:45	10/03/23 05:08	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 09:45	10/01/23 16:18	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/06/23 12:22	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2144343	1	10/04/23 06:02	10/04/23 18:53	MBE	Mt. Juliet, TN



SPEEDWAY 2023-1 L1659968-12 Solid

Collected by
Leslie Petre

Collected date/time
09/21/23 10:08

Received date/time
09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141734	1	09/29/23 15:39	09/29/23 15:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 20:59	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	1.11	09/21/23 10:08	10/03/23 04:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 10:08	10/01/23 16:37	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 20:07	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2144343	1	10/04/23 06:02	10/04/23 19:13	MBE	Mt. Juliet, TN

DUPLICATE 1 L1659968-13 Solid

Collected by
Leslie Petre

Collected date/time
09/21/23 09:45

Received date/time
09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141734	1	09/29/23 15:39	09/29/23 15:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 21:02	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	31.8	09/21/23 09:45	10/03/23 05:30	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1.42	09/21/23 09:45	10/01/23 16:56	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/05/23 21:22	ICD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2144343	1	10/04/23 06:02	10/04/23 19:33	MBE	Mt. Juliet, TN

DUPLICATE 2 L1659968-14 Solid

Collected by
Leslie Petre

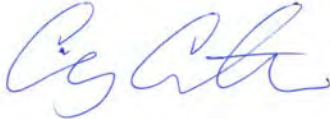
Collected date/time
09/21/23 12:50

Received date/time
09/27/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2141734	1	09/29/23 15:39	09/29/23 15:58	CMK	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2142821	5	10/03/23 12:20	10/12/23 21:05	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2143266	1.01	09/21/23 12:50	10/03/23 04:22	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2142779	1	09/21/23 12:50	10/01/23 17:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2143644	1	10/05/23 10:36	10/06/23 12:36	JDG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2144343	1	10/04/23 06:02	10/04/23 19:52	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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.4		1	09/29/2023 16:39	WG2141731

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	3.75		0.123	2.49	5	10/12/2023 20:21	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	1.23	<u>B</u> <u>J</u>	1.20	3.17	1.02	10/02/2023 13:28	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	78.8			50.0-150		10/02/2023 13:28	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	95.4			72.0-128		10/02/2023 13:28	WG2142944

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

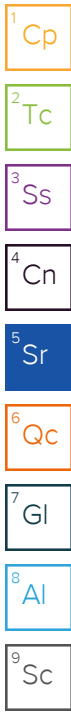
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.000886	<u>J</u>	0.000713	0.00153	1	10/01/2023 13:07	WG2142779
Toluene	0.00289	<u>J</u>	0.00199	0.00764	1	10/01/2023 13:07	WG2142779
Ethylbenzene	U		0.00113	0.00382	1	10/01/2023 13:07	WG2142779
Total Xylenes	U		0.00134	0.00993	1	10/01/2023 13:07	WG2142779
1,2-Dibromoethane	U		0.000990	0.00382	1	10/01/2023 13:07	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 13:07	WG2142779
(S) 4-Bromofluorobenzene	88.4			67.0-138		10/01/2023 13:07	WG2142779
(S) 1,2-Dichloroethane-d4	101			70.0-130		10/01/2023 13:07	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		64.8	187	1	10/05/2023 17:13	WG2143644
(S) o-Terphenyl	66.8			50.0-150		10/05/2023 17:13	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00286	0.00746	1	10/04/2023 05:21	WG2143658
Acenaphthene	U		0.00260	0.00746	1	10/04/2023 05:21	WG2143658
Acenaphthylene	U		0.00269	0.00746	1	10/04/2023 05:21	WG2143658
Benzo(a)anthracene	U		0.00215	0.00746	1	10/04/2023 05:21	WG2143658
Benzo(a)pyrene	U		0.00223	0.00746	1	10/04/2023 05:21	WG2143658
Benzo(b)fluoranthene	U		0.00190	0.00746	1	10/04/2023 05:21	WG2143658
Benzo(g,h,i)perylene	U		0.00220	0.00746	1	10/04/2023 05:21	WG2143658
Benzo(k)fluoranthene	U		0.00267	0.00746	1	10/04/2023 05:21	WG2143658
Chrysene	U		0.00288	0.00746	1	10/04/2023 05:21	WG2143658
Dibenz(a,h)anthracene	U		0.00214	0.00746	1	10/04/2023 05:21	WG2143658
Fluoranthene	U		0.00282	0.00746	1	10/04/2023 05:21	WG2143658
Fluorene	U		0.00255	0.00746	1	10/04/2023 05:21	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00225	0.00746	1	10/04/2023 05:21	WG2143658
Naphthalene	U		0.00507	0.0249	1	10/04/2023 05:21	WG2143658
Phenanthrene	U		0.00287	0.00746	1	10/04/2023 05:21	WG2143658
Pyrene	U		0.00249	0.00746	1	10/04/2023 05:21	WG2143658
1-Methylnaphthalene	U		0.00558	0.0249	1	10/04/2023 05:21	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00531	0.0249	1	10/04/2023 05:21	WG2143658
2-Chloronaphthalene	U		0.00579	0.0249	1	10/04/2023 05:21	WG2143658
<i>(S)</i> Nitrobenzene-d5	54.1			14.0-149		10/04/2023 05:21	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	59.9			34.0-125		10/04/2023 05:21	WG2143658
<i>(S)</i> p-Terphenyl-d14	81.3			23.0-120		10/04/2023 05:21	WG2143658

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.5		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.54		0.108	2.18	5	10/03/2023 19:41	WG2142830

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.07	2.82	1.03	10/02/2023 13:51	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	80.6			50.0-150		10/02/2023 13:51	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	94.4			72.0-128		10/02/2023 13:51	WG2142944

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

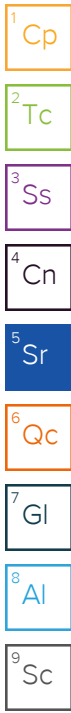
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00742		0.000554	0.00119	1	10/01/2023 13:26	WG2142779
Toluene	0.0186		0.00154	0.00593	1	10/01/2023 13:26	WG2142779
Ethylbenzene	0.00692		0.000875	0.00297	1	10/01/2023 13:26	WG2142779
Total Xylenes	0.0428		0.00104	0.00771	1	10/01/2023 13:26	WG2142779
1,2-Dibromoethane	U		0.000769	0.00297	1	10/01/2023 13:26	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 13:26	WG2142779
(S) 4-Bromofluorobenzene	90.3			67.0-138		10/01/2023 13:26	WG2142779
(S) 1,2-Dichloroethane-d4	106			70.0-130		10/01/2023 13:26	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		56.9	164	1	10/06/2023 11:39	WG2143644
(S) o-Terphenyl	57.0			50.0-150		10/06/2023 11:39	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00251	0.00655	1	10/04/2023 05:38	WG2143658
Acenaphthene	U		0.00228	0.00655	1	10/04/2023 05:38	WG2143658
Acenaphthylene	U		0.00236	0.00655	1	10/04/2023 05:38	WG2143658
Benzo(a)anthracene	U		0.00189	0.00655	1	10/04/2023 05:38	WG2143658
Benzo(a)pyrene	U		0.00196	0.00655	1	10/04/2023 05:38	WG2143658
Benzo(b)fluoranthene	U		0.00167	0.00655	1	10/04/2023 05:38	WG2143658
Benzo(g,h,i)perylene	U		0.00193	0.00655	1	10/04/2023 05:38	WG2143658
Benzo(k)fluoranthene	U		0.00235	0.00655	1	10/04/2023 05:38	WG2143658
Chrysene	U		0.00253	0.00655	1	10/04/2023 05:38	WG2143658
Dibenz(a,h)anthracene	U		0.00188	0.00655	1	10/04/2023 05:38	WG2143658
Fluoranthene	U		0.00248	0.00655	1	10/04/2023 05:38	WG2143658
Fluorene	U		0.00224	0.00655	1	10/04/2023 05:38	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00198	0.00655	1	10/04/2023 05:38	WG2143658
Naphthalene	U		0.00446	0.0218	1	10/04/2023 05:38	WG2143658
Phenanthrene	U		0.00252	0.00655	1	10/04/2023 05:38	WG2143658
Pyrene	U		0.00218	0.00655	1	10/04/2023 05:38	WG2143658
1-Methylnaphthalene	U		0.00490	0.0218	1	10/04/2023 05:38	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00466	0.0218	1	10/04/2023 05:38	WG2143658
2-Chloronaphthalene	U		0.00509	0.0218	1	10/04/2023 05:38	WG2143658
<i>(S)</i> Nitrobenzene-d5	75.5			14.0-149		10/04/2023 05:38	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	64.7			34.0-125		10/04/2023 05:38	WG2143658
<i>(S)</i> p-Terphenyl-d14	78.8			23.0-120		10/04/2023 05:38	WG2143658

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.6		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	3.97		0.128	2.58	5	10/12/2023 20:24	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.25	3.29	1.02	10/02/2023 14:13	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	78.4			50.0-150		10/02/2023 14:13	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	94.1			72.0-128		10/02/2023 14:13	WG2142944

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000764	0.00164	1	10/01/2023 13:45	WG2142779
Toluene	U		0.00213	0.00818	1	10/01/2023 13:45	WG2142779
Ethylbenzene	U		0.00121	0.00409	1	10/01/2023 13:45	WG2142779
Total Xylenes	U		0.00144	0.0106	1	10/01/2023 13:45	WG2142779
1,2-Dibromoethane	U		0.00106	0.00409	1	10/01/2023 13:45	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 13:45	WG2142779
(S) 4-Bromofluorobenzene	90.1			67.0-138		10/01/2023 13:45	WG2142779
(S) 1,2-Dichloroethane-d4	105			70.0-130		10/01/2023 13:45	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

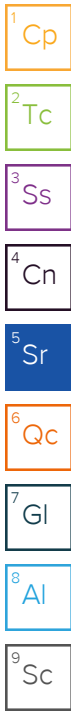
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		67.2	193	1	10/06/2023 11:54	WG2143644
(S) o-Terphenyl	49.4	<u>J2</u>		50.0-150		10/06/2023 11:54	WG2143644

Sample Narrative:

L1659968-03 WG2143644: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00297	0.00774	1	10/04/2023 05:56	WG2143658
Acenaphthene	U		0.00269	0.00774	1	10/04/2023 05:56	WG2143658
Acenaphthylene	U		0.00278	0.00774	1	10/04/2023 05:56	WG2143658
Benzo(a)anthracene	U		0.00223	0.00774	1	10/04/2023 05:56	WG2143658
Benzo(a)pyrene	U		0.00231	0.00774	1	10/04/2023 05:56	WG2143658
Benzo(b)fluoranthene	U		0.00197	0.00774	1	10/04/2023 05:56	WG2143658
Benzo(g,h,i)perylene	U		0.00228	0.00774	1	10/04/2023 05:56	WG2143658
Benzo(k)fluoranthene	U		0.00277	0.00774	1	10/04/2023 05:56	WG2143658
Chrysene	U		0.00299	0.00774	1	10/04/2023 05:56	WG2143658
Dibenz(a,h)anthracene	U		0.00222	0.00774	1	10/04/2023 05:56	WG2143658
Fluoranthene	U		0.00293	0.00774	1	10/04/2023 05:56	WG2143658
Fluorene	U		0.00264	0.00774	1	10/04/2023 05:56	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00233	0.00774	1	10/04/2023 05:56	WG2143658
Naphthalene	U		0.00526	0.0258	1	10/04/2023 05:56	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	U		0.00298	0.00774	1	10/04/2023 05:56	WG2143658
Pyrene	U		0.00258	0.00774	1	10/04/2023 05:56	WG2143658
1-Methylnaphthalene	U		0.00579	0.0258	1	10/04/2023 05:56	WG2143658
2-Methylnaphthalene	U		0.00551	0.0258	1	10/04/2023 05:56	WG2143658
2-Chloronaphthalene	U		0.00601	0.0258	1	10/04/2023 05:56	WG2143658
<i>(S)</i> Nitrobenzene-d5	74.6			14.0-149		10/04/2023 05:56	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	67.9			34.0-125		10/04/2023 05:56	WG2143658
<i>(S)</i> p-Terphenyl-d14	72.3			23.0-120		10/04/2023 05:56	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.6		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.39	J	0.123	2.48	5	10/12/2023 20:27	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	7.37	B	2.38	6.26	2.02	10/02/2023 23:23	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	76.3			50.0-150		10/02/2023 23:23	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	94.4			72.0-128		10/02/2023 23:23	WG2142944

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

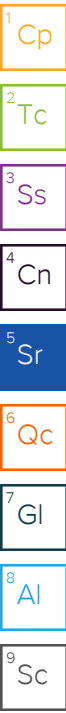
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000709	0.00152	1	10/01/2023 14:04	WG2142779
Toluene	0.00304	J	0.00197	0.00759	1	10/01/2023 14:04	WG2142779
Ethylbenzene	U		0.00112	0.00379	1	10/01/2023 14:04	WG2142779
Total Xylenes	U		0.00134	0.00987	1	10/01/2023 14:04	WG2142779
1,2-Dibromoethane	U		0.000984	0.00379	1	10/01/2023 14:04	WG2142779
(S) Toluene-d8	102			75.0-131		10/01/2023 14:04	WG2142779
(S) 4-Bromofluorobenzene	89.9			67.0-138		10/01/2023 14:04	WG2142779
(S) 1,2-Dichloroethane-d4	103			70.0-130		10/01/2023 14:04	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		64.6	186	1	10/05/2023 18:42	WG2143644
(S) o-Terphenyl	57.6			50.0-150		10/05/2023 18:42	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00285	0.00744	1	10/04/2023 06:13	WG2143658
Acenaphthene	U		0.00259	0.00744	1	10/04/2023 06:13	WG2143658
Acenaphthylene	U		0.00268	0.00744	1	10/04/2023 06:13	WG2143658
Benzo(a)anthracene	U		0.00215	0.00744	1	10/04/2023 06:13	WG2143658
Benzo(a)pyrene	U		0.00222	0.00744	1	10/04/2023 06:13	WG2143658
Benzo(b)fluoranthene	U		0.00190	0.00744	1	10/04/2023 06:13	WG2143658
Benzo(g,h,i)perylene	U		0.00220	0.00744	1	10/04/2023 06:13	WG2143658
Benzo(k)fluoranthene	U		0.00267	0.00744	1	10/04/2023 06:13	WG2143658
Chrysene	U		0.00288	0.00744	1	10/04/2023 06:13	WG2143658
Dibenz(a,h)anthracene	U		0.00213	0.00744	1	10/04/2023 06:13	WG2143658
Fluoranthene	U		0.00282	0.00744	1	10/04/2023 06:13	WG2143658
Fluorene	U		0.00254	0.00744	1	10/04/2023 06:13	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00225	0.00744	1	10/04/2023 06:13	WG2143658
Naphthalene	U		0.00506	0.0248	1	10/04/2023 06:13	WG2143658
Phenanthrene	U		0.00287	0.00744	1	10/04/2023 06:13	WG2143658
Pyrene	U		0.00248	0.00744	1	10/04/2023 06:13	WG2143658
1-Methylnaphthalene	U		0.00557	0.0248	1	10/04/2023 06:13	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00530	0.0248	1	10/04/2023 06:13	WG2143658
2-Chloronaphthalene	U		0.00578	0.0248	1	10/04/2023 06:13	WG2143658
<i>(S)</i> Nitrobenzene-d5	56.6			14.0-149		10/04/2023 06:13	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	68.0			34.0-125		10/04/2023 06:13	WG2143658
<i>(S)</i> p-Terphenyl-d14	96.3			23.0-120		10/04/2023 06:13	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.2		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	5.75		0.127	2.56	5	10/12/2023 20:39	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		4.86	12.8	4	10/02/2023 21:30	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	75.9			50.0-150		10/02/2023 21:30	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	94.0			72.0-128		10/02/2023 21:30	WG2142944

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

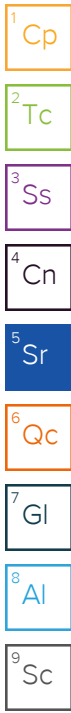
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000728	0.00156	1	10/01/2023 14:23	WG2142779
Toluene	0.00343	J	0.00203	0.00779	1	10/01/2023 14:23	WG2142779
Ethylbenzene	U		0.00115	0.00390	1	10/01/2023 14:23	WG2142779
Total Xylenes	0.00156	J	0.00137	0.0101	1	10/01/2023 14:23	WG2142779
1,2-Dibromoethane	U		0.00101	0.00390	1	10/01/2023 14:23	WG2142779
(S) Toluene-d8	100			75.0-131		10/01/2023 14:23	WG2142779
(S) 4-Bromofluorobenzene	92.4			67.0-138		10/01/2023 14:23	WG2142779
(S) 1,2-Dichloroethane-d4	106			70.0-130		10/01/2023 14:23	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		66.6	192	1	10/06/2023 12:08	WG2143644
(S) o-Terphenyl	56.0			50.0-150		10/06/2023 12:08	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00294	0.00768	1	10/04/2023 06:30	WG2143658
Acenaphthene	U		0.00267	0.00768	1	10/04/2023 06:30	WG2143658
Acenaphthylene	U		0.00276	0.00768	1	10/04/2023 06:30	WG2143658
Benzo(a)anthracene	U		0.00221	0.00768	1	10/04/2023 06:30	WG2143658
Benzo(a)pyrene	U		0.00229	0.00768	1	10/04/2023 06:30	WG2143658
Benzo(b)fluoranthene	U		0.00196	0.00768	1	10/04/2023 06:30	WG2143658
Benzo(g,h,i)perylene	U		0.00226	0.00768	1	10/04/2023 06:30	WG2143658
Benzo(k)fluoranthene	U		0.00275	0.00768	1	10/04/2023 06:30	WG2143658
Chrysene	U		0.00297	0.00768	1	10/04/2023 06:30	WG2143658
Dibenz(a,h)anthracene	U		0.00220	0.00768	1	10/04/2023 06:30	WG2143658
Fluoranthene	U		0.00290	0.00768	1	10/04/2023 06:30	WG2143658
Fluorene	U		0.00262	0.00768	1	10/04/2023 06:30	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00232	0.00768	1	10/04/2023 06:30	WG2143658
Naphthalene	U		0.00522	0.0256	1	10/04/2023 06:30	WG2143658
Phenanthrene	U		0.00295	0.00768	1	10/04/2023 06:30	WG2143658
Pyrene	U		0.00256	0.00768	1	10/04/2023 06:30	WG2143658
1-Methylnaphthalene	U		0.00574	0.0256	1	10/04/2023 06:30	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00546	0.0256	1	10/04/2023 06:30	WG2143658
2-Chloronaphthalene	U		0.00596	0.0256	1	10/04/2023 06:30	WG2143658
<i>(S)</i> Nitrobenzene-d5	76.3			14.0-149		10/04/2023 06:30	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	63.8			34.0-125		10/04/2023 06:30	WG2143658
<i>(S)</i> p-Terphenyl-d14	65.1			23.0-120		10/04/2023 06:30	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.1		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.61		0.119	2.41	5	10/12/2023 20:42	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.17	3.07	1.02	10/02/2023 14:45	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	79.9			50.0-150		10/02/2023 14:45	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	94.4			72.0-128		10/02/2023 14:45	WG2142944

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

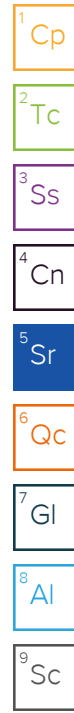
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000672	0.00144	1	10/01/2023 14:42	WG2142779
Toluene	0.00602	J	0.00187	0.00720	1	10/01/2023 14:42	WG2142779
Ethylbenzene	U		0.00106	0.00360	1	10/01/2023 14:42	WG2142779
Total Xylenes	0.00472	J	0.00127	0.00936	1	10/01/2023 14:42	WG2142779
1,2-Dibromoethane	U		0.000933	0.00360	1	10/01/2023 14:42	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 14:42	WG2142779
(S) 4-Bromofluorobenzene	85.8			67.0-138		10/01/2023 14:42	WG2142779
(S) 1,2-Dichloroethane-d4	101			70.0-130		10/01/2023 14:42	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		62.7	181	1	10/05/2023 19:20	WG2143644
(S) o-Terphenyl	53.9			50.0-150		10/05/2023 19:20	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00277	0.00722	1	10/04/2023 06:47	WG2143658
Acenaphthene	U		0.00252	0.00722	1	10/04/2023 06:47	WG2143658
Acenaphthylene	U		0.00260	0.00722	1	10/04/2023 06:47	WG2143658
Benzo(a)anthracene	U		0.00208	0.00722	1	10/04/2023 06:47	WG2143658
Benzo(a)pyrene	U		0.00216	0.00722	1	10/04/2023 06:47	WG2143658
Benzo(b)fluoranthene	U		0.00184	0.00722	1	10/04/2023 06:47	WG2143658
Benzo(g,h,i)perylene	U		0.00213	0.00722	1	10/04/2023 06:47	WG2143658
Benzo(k)fluoranthene	U		0.00259	0.00722	1	10/04/2023 06:47	WG2143658
Chrysene	U		0.00279	0.00722	1	10/04/2023 06:47	WG2143658
Dibenz(a,h)anthracene	U		0.00207	0.00722	1	10/04/2023 06:47	WG2143658
Fluoranthene	U		0.00273	0.00722	1	10/04/2023 06:47	WG2143658
Fluorene	U		0.00247	0.00722	1	10/04/2023 06:47	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00218	0.00722	1	10/04/2023 06:47	WG2143658
Naphthalene	U		0.00491	0.0241	1	10/04/2023 06:47	WG2143658
Phenanthrene	U		0.00278	0.00722	1	10/04/2023 06:47	WG2143658
Pyrene	U		0.00241	0.00722	1	10/04/2023 06:47	WG2143658
1-Methylnaphthalene	U		0.00541	0.0241	1	10/04/2023 06:47	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00514	0.0241	1	10/04/2023 06:47	WG2143658
2-Chloronaphthalene	U		0.00561	0.0241	1	10/04/2023 06:47	WG2143658
<i>(S)</i> Nitrobenzene-d5	58.3			14.0-149		10/04/2023 06:47	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	64.4			34.0-125		10/04/2023 06:47	WG2143658
<i>(S)</i> p-Terphenyl-d14	88.8			23.0-120		10/04/2023 06:47	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.8		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	6.92		0.126	2.54	5	10/12/2023 20:45	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.24	3.27	1.03	10/02/2023 15:08	WG2142944
(S) a,a,a-Trifluorotoluene(FID)	104			50.0-150		10/02/2023 15:08	WG2142944
(S) a,a,a-Trifluorotoluene(PID)	95.0			72.0-128		10/02/2023 15:08	WG2142944

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

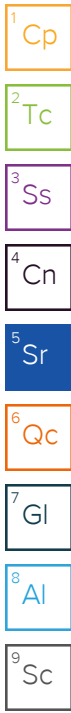
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000737	0.00158	1	10/01/2023 15:01	WG2142779
Toluene	0.00281	J	0.00205	0.00789	1	10/01/2023 15:01	WG2142779
Ethylbenzene	U		0.00116	0.00395	1	10/01/2023 15:01	WG2142779
Total Xylenes	U		0.00139	0.0103	1	10/01/2023 15:01	WG2142779
1,2-Dibromoethane	U		0.00102	0.00395	1	10/01/2023 15:01	WG2142779
(S) Toluene-d8	103			75.0-131		10/01/2023 15:01	WG2142779
(S) 4-Bromofluorobenzene	90.6			67.0-138		10/01/2023 15:01	WG2142779
(S) 1,2-Dichloroethane-d4	101			70.0-130		10/01/2023 15:01	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		66.1	190	1	10/05/2023 20:40	WG2143644
(S) o-Terphenyl	51.2			50.0-150		10/05/2023 20:40	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00292	0.00761	1	10/04/2023 07:05	WG2143658
Acenaphthene	U		0.00265	0.00761	1	10/04/2023 07:05	WG2143658
Acenaphthylene	U		0.00274	0.00761	1	10/04/2023 07:05	WG2143658
Benzo(a)anthracene	U		0.00219	0.00761	1	10/04/2023 07:05	WG2143658
Benzo(a)pyrene	U		0.00227	0.00761	1	10/04/2023 07:05	WG2143658
Benzo(b)fluoranthene	U		0.00194	0.00761	1	10/04/2023 07:05	WG2143658
Benzo(g,h,i)perylene	U		0.00225	0.00761	1	10/04/2023 07:05	WG2143658
Benzo(k)fluoranthene	U		0.00273	0.00761	1	10/04/2023 07:05	WG2143658
Chrysene	U		0.00294	0.00761	1	10/04/2023 07:05	WG2143658
Dibenz(a,h)anthracene	U		0.00218	0.00761	1	10/04/2023 07:05	WG2143658
Fluoranthene	U		0.00288	0.00761	1	10/04/2023 07:05	WG2143658
Fluorene	U		0.00260	0.00761	1	10/04/2023 07:05	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00230	0.00761	1	10/04/2023 07:05	WG2143658
Naphthalene	U		0.00518	0.0254	1	10/04/2023 07:05	WG2143658
Phenanthrene	U		0.00293	0.00761	1	10/04/2023 07:05	WG2143658
Pyrene	U		0.00254	0.00761	1	10/04/2023 07:05	WG2143658
1-Methylnaphthalene	U		0.00570	0.0254	1	10/04/2023 07:05	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00542	0.0254	1	10/04/2023 07:05	WG2143658
2-Chloronaphthalene	U		0.00591	0.0254	1	10/04/2023 07:05	WG2143658
<i>(S)</i> Nitrobenzene-d5	75.2			14.0-149		10/04/2023 07:05	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	52.5			34.0-125		10/04/2023 07:05	WG2143658
<i>(S)</i> p-Terphenyl-d14	67.7			23.0-120		10/04/2023 07:05	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.9		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	2.43		0.109	2.20	5	10/12/2023 20:49	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	1.17	<u>B</u> <u>J</u>	1.07	2.81	1.02	10/03/2023 03:15	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	82.2			50.0-150		10/03/2023 03:15	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	95.6			72.0-128		10/03/2023 03:15	WG2143266

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

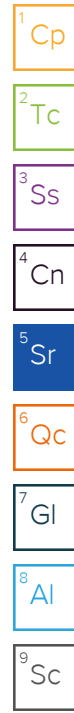
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000577	0.00123	1	10/01/2023 15:20	WG2142779
Toluene	0.00254	<u>J</u>	0.00160	0.00617	1	10/01/2023 15:20	WG2142779
Ethylbenzene	U		0.000910	0.00309	1	10/01/2023 15:20	WG2142779
Total Xylenes	U		0.00109	0.00802	1	10/01/2023 15:20	WG2142779
1,2-Dibromoethane	U		0.000800	0.00309	1	10/01/2023 15:20	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 15:20	WG2142779
(S) 4-Bromofluorobenzene	89.5			67.0-138		10/01/2023 15:20	WG2142779
(S) 1,2-Dichloroethane-d4	103			70.0-130		10/01/2023 15:20	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		57.3	165	1	10/05/2023 19:34	WG2143644
(S) o-Terphenyl	51.9			50.0-150		10/05/2023 19:34	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00253	0.00660	1	10/04/2023 07:22	WG2143658
Acenaphthene	U		0.00230	0.00660	1	10/04/2023 07:22	WG2143658
Acenaphthylene	U		0.00238	0.00660	1	10/04/2023 07:22	WG2143658
Benzo(a)anthracene	U		0.00190	0.00660	1	10/04/2023 07:22	WG2143658
Benzo(a)pyrene	U		0.00197	0.00660	1	10/04/2023 07:22	WG2143658
Benzo(b)fluoranthene	U		0.00168	0.00660	1	10/04/2023 07:22	WG2143658
Benzo(g,h,i)perylene	U		0.00195	0.00660	1	10/04/2023 07:22	WG2143658
Benzo(k)fluoranthene	U		0.00237	0.00660	1	10/04/2023 07:22	WG2143658
Chrysene	U		0.00255	0.00660	1	10/04/2023 07:22	WG2143658
Dibenz(a,h)anthracene	U		0.00189	0.00660	1	10/04/2023 07:22	WG2143658
Fluoranthene	U		0.00250	0.00660	1	10/04/2023 07:22	WG2143658
Fluorene	U		0.00226	0.00660	1	10/04/2023 07:22	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00199	0.00660	1	10/04/2023 07:22	WG2143658
Naphthalene	U		0.00449	0.0220	1	10/04/2023 07:22	WG2143658
Phenanthrene	U		0.00254	0.00660	1	10/04/2023 07:22	WG2143658
Pyrene	U		0.00220	0.00660	1	10/04/2023 07:22	WG2143658
1-Methylnaphthalene	U		0.00494	0.0220	1	10/04/2023 07:22	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00470	0.0220	1	10/04/2023 07:22	WG2143658
2-Chloronaphthalene	U		0.00513	0.0220	1	10/04/2023 07:22	WG2143658
<i>(S)</i> Nitrobenzene-d5	44.3			14.0-149		10/04/2023 07:22	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	51.8			34.0-125		10/04/2023 07:22	WG2143658
<i>(S)</i> p-Terphenyl-d14	75.4			23.0-120		10/04/2023 07:22	WG2143658

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.0		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	9.49		0.127	2.56	5	10/12/2023 20:52	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		4.92	12.9	4.04	10/03/2023 04:45	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	79.3			50.0-150		10/03/2023 04:45	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.8			72.0-128		10/03/2023 04:45	WG2143266

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

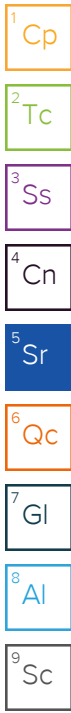
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000747	0.00160	1	10/01/2023 15:39	WG2142779
Toluene	0.00342	J	0.00208	0.00800	1	10/01/2023 15:39	WG2142779
Ethylbenzene	U		0.00118	0.00400	1	10/01/2023 15:39	WG2142779
Total Xylenes	U		0.00141	0.0104	1	10/01/2023 15:39	WG2142779
1,2-Dibromoethane	U		0.00104	0.00400	1	10/01/2023 15:39	WG2142779
(S) Toluene-d8	99.2			75.0-131		10/01/2023 15:39	WG2142779
(S) 4-Bromofluorobenzene	89.8			67.0-138		10/01/2023 15:39	WG2142779
(S) 1,2-Dichloroethane-d4	103			70.0-130		10/01/2023 15:39	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		66.8	192	1	10/05/2023 20:54	WG2143644
(S) o-Terphenyl	55.1			50.0-150		10/05/2023 20:54	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00295	0.00769	1	10/04/2023 07:39	WG2143658
Acenaphthene	U		0.00268	0.00769	1	10/04/2023 07:39	WG2143658
Acenaphthylene	U		0.00277	0.00769	1	10/04/2023 07:39	WG2143658
Benzo(a)anthracene	U		0.00222	0.00769	1	10/04/2023 07:39	WG2143658
Benzo(a)pyrene	U		0.00229	0.00769	1	10/04/2023 07:39	WG2143658
Benzo(b)fluoranthene	U		0.00196	0.00769	1	10/04/2023 07:39	WG2143658
Benzo(g,h,i)perylene	U		0.00227	0.00769	1	10/04/2023 07:39	WG2143658
Benzo(k)fluoranthene	U		0.00276	0.00769	1	10/04/2023 07:39	WG2143658
Chrysene	U		0.00297	0.00769	1	10/04/2023 07:39	WG2143658
Dibenz(a,h)anthracene	U		0.00220	0.00769	1	10/04/2023 07:39	WG2143658
Fluoranthene	U		0.00291	0.00769	1	10/04/2023 07:39	WG2143658
Fluorene	U		0.00263	0.00769	1	10/04/2023 07:39	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00232	0.00769	1	10/04/2023 07:39	WG2143658
Naphthalene	U		0.00523	0.0256	1	10/04/2023 07:39	WG2143658
Phenanthrene	U		0.00296	0.00769	1	10/04/2023 07:39	WG2143658
Pyrene	U		0.00256	0.00769	1	10/04/2023 07:39	WG2143658
1-Methylnaphthalene	U		0.00575	0.0256	1	10/04/2023 07:39	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00547	0.0256	1	10/04/2023 07:39	WG2143658
2-Chloronaphthalene	U		0.00597	0.0256	1	10/04/2023 07:39	WG2143658
<i>(S)</i> Nitrobenzene-d5	57.3			14.0-149		10/04/2023 07:39	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	49.0			34.0-125		10/04/2023 07:39	WG2143658
<i>(S)</i> p-Terphenyl-d14	63.5			23.0-120		10/04/2023 07:39	WG2143658

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.6		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	3.22		0.107	2.16	5	10/12/2023 20:55	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.03	2.70	1	10/03/2023 03:37	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	79.3			50.0-150		10/03/2023 03:37	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.4			72.0-128		10/03/2023 03:37	WG2143266

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

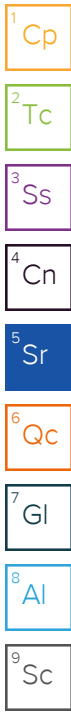
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000542	0.00116	1	10/01/2023 15:58	WG2142779
Toluene	0.00470	J	0.00151	0.00580	1	10/01/2023 15:58	WG2142779
Ethylbenzene	U		0.000855	0.00290	1	10/01/2023 15:58	WG2142779
Total Xylenes	0.00145	J	0.00102	0.00754	1	10/01/2023 15:58	WG2142779
1,2-Dibromoethane	U		0.000752	0.00290	1	10/01/2023 15:58	WG2142779
(S) Toluene-d8	104			75.0-131		10/01/2023 15:58	WG2142779
(S) 4-Bromofluorobenzene	89.1			67.0-138		10/01/2023 15:58	WG2142779
(S) 1,2-Dichloroethane-d4	99.5			70.0-130		10/01/2023 15:58	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		56.3	162	1	10/05/2023 19:48	WG2143644
(S) o-Terphenyl	58.5			50.0-150		10/05/2023 19:48	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00248	0.00648	1	10/04/2023 07:56	WG2143658
Acenaphthene	U		0.00226	0.00648	1	10/04/2023 07:56	WG2143658
Acenaphthylene	U		0.00233	0.00648	1	10/04/2023 07:56	WG2143658
Benzo(a)anthracene	U		0.00187	0.00648	1	10/04/2023 07:56	WG2143658
Benzo(a)pyrene	U		0.00193	0.00648	1	10/04/2023 07:56	WG2143658
Benzo(b)fluoranthene	U		0.00165	0.00648	1	10/04/2023 07:56	WG2143658
Benzo(g,h,i)perylene	U		0.00191	0.00648	1	10/04/2023 07:56	WG2143658
Benzo(k)fluoranthene	U		0.00232	0.00648	1	10/04/2023 07:56	WG2143658
Chrysene	U		0.00251	0.00648	1	10/04/2023 07:56	WG2143658
Dibenz(a,h)anthracene	U		0.00186	0.00648	1	10/04/2023 07:56	WG2143658
Fluoranthene	U		0.00245	0.00648	1	10/04/2023 07:56	WG2143658
Fluorene	U		0.00221	0.00648	1	10/04/2023 07:56	WG2143658
Indeno(1,2,3-cd)pyrene	U		0.00196	0.00648	1	10/04/2023 07:56	WG2143658
Naphthalene	U		0.00441	0.0216	1	10/04/2023 07:56	WG2143658
Phenanthrene	U		0.00250	0.00648	1	10/04/2023 07:56	WG2143658
Pyrene	U		0.00216	0.00648	1	10/04/2023 07:56	WG2143658
1-Methylnaphthalene	U		0.00485	0.0216	1	10/04/2023 07:56	WG2143658



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00461	0.0216	1	10/04/2023 07:56	WG2143658
2-Chloronaphthalene	U		0.00503	0.0216	1	10/04/2023 07:56	WG2143658
<i>(S)</i> Nitrobenzene-d5	73.7			14.0-149		10/04/2023 07:56	WG2143658
<i>(S)</i> 2-Fluorobiphenyl	70.5			34.0-125		10/04/2023 07:56	WG2143658
<i>(S)</i> p-Terphenyl-d14	88.1			23.0-120		10/04/2023 07:56	WG2143658

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

SPEEDWAY 2023-1

Collected date/time: 09/21/23 09:45

SAMPLE RESULTS - 11

L1659968

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.0		1	09/29/2023 16:21	WG2141732

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	6.97	<u>J3</u>	0.132	2.67	5	10/12/2023 20:04	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		14.4	38.0	11.4	10/03/2023 05:08	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	77.3			50.0-150		10/03/2023 05:08	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.5			72.0-128		10/03/2023 05:08	WG2143266

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

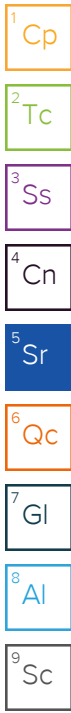
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00112	<u>J</u>	0.000778	0.00167	1	10/01/2023 16:18	WG2142779
Toluene	0.00855		0.00217	0.00833	1	10/01/2023 16:18	WG2142779
Ethylbenzene	U		0.00123	0.00417	1	10/01/2023 16:18	WG2142779
Total Xylenes	0.00213	<u>J</u>	0.00147	0.0108	1	10/01/2023 16:18	WG2142779
1,2-Dibromoethane	U		0.00108	0.00417	1	10/01/2023 16:18	WG2142779
(S) Toluene-d8	100			75.0-131		10/01/2023 16:18	WG2142779
(S) 4-Bromofluorobenzene	91.0			67.0-138		10/01/2023 16:18	WG2142779
(S) 1,2-Dichloroethane-d4	102			70.0-130		10/01/2023 16:18	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		69.5	200	1	10/06/2023 12:22	WG2143644
(S) o-Terphenyl	55.0			50.0-150		10/06/2023 12:22	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00307	0.00800	1	10/04/2023 18:53	WG2144343
Acenaphthene	U		0.00279	0.00800	1	10/04/2023 18:53	WG2144343
Acenaphthylene	U		0.00288	0.00800	1	10/04/2023 18:53	WG2144343
Benzo(a)anthracene	U		0.00231	0.00800	1	10/04/2023 18:53	WG2144343
Benzo(a)pyrene	U		0.00239	0.00800	1	10/04/2023 18:53	WG2144343
Benzo(b)fluoranthene	U		0.00204	0.00800	1	10/04/2023 18:53	WG2144343
Benzo(g,h,i)perylene	U		0.00236	0.00800	1	10/04/2023 18:53	WG2144343
Benzo(k)fluoranthene	U		0.00287	0.00800	1	10/04/2023 18:53	WG2144343
Chrysene	U		0.00309	0.00800	1	10/04/2023 18:53	WG2144343
Dibenz(a,h)anthracene	U		0.00229	0.00800	1	10/04/2023 18:53	WG2144343
Fluoranthene	U		0.00303	0.00800	1	10/04/2023 18:53	WG2144343
Fluorene	U		0.00273	0.00800	1	10/04/2023 18:53	WG2144343
Indeno(1,2,3-cd)pyrene	U		0.00241	0.00800	1	10/04/2023 18:53	WG2144343
Naphthalene	U		0.00544	0.0267	1	10/04/2023 18:53	WG2144343
Phenanthrene	U		0.00308	0.00800	1	10/04/2023 18:53	WG2144343
Pyrene	U		0.00267	0.00800	1	10/04/2023 18:53	WG2144343
1-Methylnaphthalene	U		0.00599	0.0267	1	10/04/2023 18:53	WG2144343



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00570	0.0267	1	10/04/2023 18:53	WG2144343
2-Chloronaphthalene	U		0.00622	0.0267	1	10/04/2023 18:53	WG2144343
<i>(S)</i> Nitrobenzene-d5	41.5			14.0-149		10/04/2023 18:53	WG2144343
<i>(S)</i> 2-Fluorobiphenyl	48.6			34.0-125		10/04/2023 18:53	WG2144343
<i>(S)</i> p-Terphenyl-d14	35.7			23.0-120		10/04/2023 18:53	WG2144343

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

SPEEDWAY 2023-1

Collected date/time: 09/21/23 10:08

SAMPLE RESULTS - 12

L1659968

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.3		1	09/29/2023 15:58	WG2141734

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	3.30		0.127	2.56	5	10/12/2023 20:59	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.34	3.55	1.11	10/03/2023 04:00	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	80.4			50.0-150		10/03/2023 04:00	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.5			72.0-128		10/03/2023 04:00	WG2143266

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

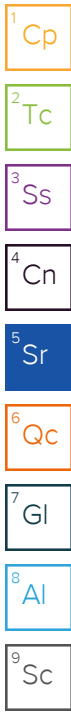
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	0.00225		0.000750	0.00161	1	10/01/2023 16:37	WG2142779
Toluene	0.00259	J	0.00209	0.00803	1	10/01/2023 16:37	WG2142779
Ethylbenzene	0.00304	J	0.00118	0.00402	1	10/01/2023 16:37	WG2142779
Total Xylenes	0.00194	J	0.00141	0.0104	1	10/01/2023 16:37	WG2142779
1,2-Dibromoethane	U		0.00104	0.00402	1	10/01/2023 16:37	WG2142779
(S) Toluene-d8	100			75.0-131		10/01/2023 16:37	WG2142779
(S) 4-Bromofluorobenzene	93.6			67.0-138		10/01/2023 16:37	WG2142779
(S) 1,2-Dichloroethane-d4	105			70.0-130		10/01/2023 16:37	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		66.6	192	1	10/05/2023 20:07	WG2143644
(S) o-Terphenyl	53.1			50.0-150		10/05/2023 20:07	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00294	0.00767	1	10/04/2023 19:13	WG2144343
Acenaphthene	U		0.00267	0.00767	1	10/04/2023 19:13	WG2144343
Acenaphthylene	U		0.00276	0.00767	1	10/04/2023 19:13	WG2144343
Benzo(a)anthracene	U		0.00221	0.00767	1	10/04/2023 19:13	WG2144343
Benzo(a)pyrene	U		0.00229	0.00767	1	10/04/2023 19:13	WG2144343
Benzo(b)fluoranthene	U		0.00196	0.00767	1	10/04/2023 19:13	WG2144343
Benzo(g,h,i)perylene	U		0.00226	0.00767	1	10/04/2023 19:13	WG2144343
Benzo(k)fluoranthene	U		0.00275	0.00767	1	10/04/2023 19:13	WG2144343
Chrysene	U		0.00296	0.00767	1	10/04/2023 19:13	WG2144343
Dibenz(a,h)anthracene	U		0.00220	0.00767	1	10/04/2023 19:13	WG2144343
Fluoranthene	U		0.00290	0.00767	1	10/04/2023 19:13	WG2144343
Fluorene	U		0.00262	0.00767	1	10/04/2023 19:13	WG2144343
Indeno(1,2,3-cd)pyrene	U		0.00231	0.00767	1	10/04/2023 19:13	WG2144343
Naphthalene	U		0.00521	0.0256	1	10/04/2023 19:13	WG2144343
Phenanthrene	U		0.00295	0.00767	1	10/04/2023 19:13	WG2144343
Pyrene	U		0.00256	0.00767	1	10/04/2023 19:13	WG2144343
1-Methylnaphthalene	U		0.00574	0.0256	1	10/04/2023 19:13	WG2144343



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00546	0.0256	1	10/04/2023 19:13	WG2144343
2-Chloronaphthalene	U		0.00595	0.0256	1	10/04/2023 19:13	WG2144343
<i>(S)</i> Nitrobenzene-d5	60.9			14.0-149		10/04/2023 19:13	WG2144343
<i>(S)</i> 2-Fluorobiphenyl	68.9			34.0-125		10/04/2023 19:13	WG2144343
<i>(S)</i> p-Terphenyl-d14	56.9			23.0-120		10/04/2023 19:13	WG2144343

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	67.2		1	09/29/2023 15:58	WG2141734

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	12.4		0.147	2.97	5	10/12/2023 21:02	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		44.9	118	31.8	10/03/2023 05:30	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	80.1			50.0-150		10/03/2023 05:30	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.9			72.0-128		10/03/2023 05:30	WG2143266

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

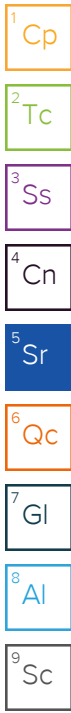
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.00121	0.00260	1.42	10/01/2023 16:56	WG2142779
Toluene	0.00843	J	0.00338	0.0130	1.42	10/01/2023 16:56	WG2142779
Ethylbenzene	U		0.00192	0.00649	1.42	10/01/2023 16:56	WG2142779
Total Xylenes	U		0.00229	0.0169	1.42	10/01/2023 16:56	WG2142779
1,2-Dibromoethane	U		0.00168	0.00649	1.42	10/01/2023 16:56	WG2142779
(S) Toluene-d8	102			75.0-131		10/01/2023 16:56	WG2142779
(S) 4-Bromofluorobenzene	89.8			67.0-138		10/01/2023 16:56	WG2142779
(S) 1,2-Dichloroethane-d4	101			70.0-130		10/01/2023 16:56	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		77.5	223	1	10/05/2023 21:22	WG2143644
(S) o-Terphenyl	59.5			50.0-150		10/05/2023 21:22	WG2143644

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00342	0.00892	1	10/04/2023 19:33	WG2144343
Acenaphthene	U		0.00311	0.00892	1	10/04/2023 19:33	WG2144343
Acenaphthylene	U		0.00321	0.00892	1	10/04/2023 19:33	WG2144343
Benzo(a)anthracene	U		0.00257	0.00892	1	10/04/2023 19:33	WG2144343
Benzo(a)pyrene	U		0.00266	0.00892	1	10/04/2023 19:33	WG2144343
Benzo(b)fluoranthene	U		0.00228	0.00892	1	10/04/2023 19:33	WG2144343
Benzo(g,h,i)perylene	U		0.00263	0.00892	1	10/04/2023 19:33	WG2144343
Benzo(k)fluoranthene	U		0.00320	0.00892	1	10/04/2023 19:33	WG2144343
Chrysene	U		0.00345	0.00892	1	10/04/2023 19:33	WG2144343
Dibenz(a,h)anthracene	U		0.00256	0.00892	1	10/04/2023 19:33	WG2144343
Fluoranthene	U		0.00338	0.00892	1	10/04/2023 19:33	WG2144343
Fluorene	U		0.00305	0.00892	1	10/04/2023 19:33	WG2144343
Indeno(1,2,3-cd)pyrene	U		0.00269	0.00892	1	10/04/2023 19:33	WG2144343
Naphthalene	U		0.00607	0.0297	1	10/04/2023 19:33	WG2144343
Phenanthrene	U		0.00344	0.00892	1	10/04/2023 19:33	WG2144343
Pyrene	U		0.00297	0.00892	1	10/04/2023 19:33	WG2144343
1-Methylnaphthalene	0.0647		0.00668	0.0297	1	10/04/2023 19:33	WG2144343



DUPLICATE 1

SAMPLE RESULTS - 13

Collected date/time: 09/21/23 09:45

L1659968

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	U		0.00635	0.0297	1	10/04/2023 19:33	WG2144343
2-Chloronaphthalene	U		0.00693	0.0297	1	10/04/2023 19:33	WG2144343
<i>(S)</i> Nitrobenzene-d5	63.9			14.0-149		10/04/2023 19:33	WG2144343
<i>(S)</i> 2-Fluorobiphenyl	64.7			34.0-125		10/04/2023 19:33	WG2144343
<i>(S)</i> p-Terphenyl-d14	48.9			23.0-120		10/04/2023 19:33	WG2144343

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

DUPLICATE 2

SAMPLE RESULTS - 14

Collected date/time: 09/21/23 12:50

L1659968

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.0		1	09/29/2023 15:58	WG2141734

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	5.45		0.129	2.60	5	10/12/2023 21:05	WG2142821

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	U		1.25	3.29	1.01	10/03/2023 04:22	WG2143266
(S) a,a,a-Trifluorotoluene(FID)	79.3			50.0-150		10/03/2023 04:22	WG2143266
(S) a,a,a-Trifluorotoluene(PID)	94.2			72.0-128		10/03/2023 04:22	WG2143266

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000773	0.00165	1	10/01/2023 17:15	WG2142779
Toluene	U		0.00215	0.00827	1	10/01/2023 17:15	WG2142779
Ethylbenzene	U		0.00122	0.00414	1	10/01/2023 17:15	WG2142779
Total Xylenes	U		0.00146	0.0108	1	10/01/2023 17:15	WG2142779
1,2-Dibromoethane	U		0.00107	0.00414	1	10/01/2023 17:15	WG2142779
(S) Toluene-d8	101			75.0-131		10/01/2023 17:15	WG2142779
(S) 4-Bromofluorobenzene	83.7			67.0-138		10/01/2023 17:15	WG2142779
(S) 1,2-Dichloroethane-d4	94.9			70.0-130		10/01/2023 17:15	WG2142779

Semi-Volatile Organic Compounds (GC) by Method AK102

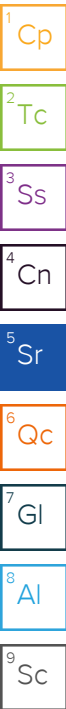
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		67.7	195	1	10/06/2023 12:36	WG2143644
(S) o-Terphenyl	43.6	<u>J2</u>		50.0-150		10/06/2023 12:36	WG2143644

Sample Narrative:

L1659968-14 WG2143644: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00299	0.00780	1	10/04/2023 19:52	WG2144343
Acenaphthene	U		0.00272	0.00780	1	10/04/2023 19:52	WG2144343
Acenaphthylene	U		0.00281	0.00780	1	10/04/2023 19:52	WG2144343
Benzo(a)anthracene	U		0.00225	0.00780	1	10/04/2023 19:52	WG2144343
Benzo(a)pyrene	U		0.00233	0.00780	1	10/04/2023 19:52	WG2144343
Benzo(b)fluoranthene	U		0.00199	0.00780	1	10/04/2023 19:52	WG2144343
Benzo(g,h,i)perylene	U		0.00230	0.00780	1	10/04/2023 19:52	WG2144343
Benzo(k)fluoranthene	U		0.00279	0.00780	1	10/04/2023 19:52	WG2144343
Chrysene	U		0.00301	0.00780	1	10/04/2023 19:52	WG2144343
Dibenz(a,h)anthracene	U		0.00223	0.00780	1	10/04/2023 19:52	WG2144343
Fluoranthene	U		0.00295	0.00780	1	10/04/2023 19:52	WG2144343
Fluorene	U		0.00266	0.00780	1	10/04/2023 19:52	WG2144343
Indeno(1,2,3-cd)pyrene	U		0.00235	0.00780	1	10/04/2023 19:52	WG2144343
Naphthalene	U		0.00530	0.0260	1	10/04/2023 19:52	WG2144343



DUPLICATE 2

SAMPLE RESULTS - 14

Collected date/time: 09/21/23 12:50

L1659968

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Phenanthrene	U		0.00300	0.00780	1	10/04/2023 19:52	WG2144343
Pyrene	U		0.00260	0.00780	1	10/04/2023 19:52	WG2144343
1-Methylnaphthalene	U		0.00583	0.0260	1	10/04/2023 19:52	WG2144343
2-Methylnaphthalene	U		0.00555	0.0260	1	10/04/2023 19:52	WG2144343
2-Chloronaphthalene	U		0.00605	0.0260	1	10/04/2023 19:52	WG2144343
<i>(S)</i> Nitrobenzene-d5	59.7			14.0-149		10/04/2023 19:52	WG2144343
<i>(S)</i> 2-Fluorobiphenyl	62.1			34.0-125		10/04/2023 19:52	WG2144343
<i>(S)</i> p-Terphenyl-d14	46.6			23.0-120		10/04/2023 19:52	WG2144343

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

Method Blank (MB)

(MB) R3979882-1 09/29/23 16:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00300			

1 Cp

2 Tc

3 Ss

L1659959-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1659959-15 09/29/23 16:39 • (DUP) R3979882-3 09/29/23 16:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	80.1	80.7	1	0.830		10

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3979882-2 09/29/23 16:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3979881-1 09/29/23 16:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

1 Cp

2 Tc

3 Ss

L1659968-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1659968-06 09/29/23 16:21 • (DUP) R3979881-3 09/29/23 16:21

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	83.1	87.5	1	5.16		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3979881-2 09/29/23 16:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3979880-1 09/29/23 15:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00300			

1 Cp

2 Tc

3 Ss

L1660089-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1660089-01 09/29/23 15:58 • (DUP) R3979880-3 09/29/23 15:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	93.2	92.9	1	0.262		10

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3979880-2 09/29/23 15:58

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3985637-1 10/12/23 19:57

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.0990	2.00

Laboratory Control Sample (LCS)

(LCS) R3985637-2 10/12/23 20:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	103	103	80.0-120	

L1659968-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659968-11 10/12/23 20:04 • (MS) R3985637-5 10/12/23 20:14 • (MSD) R3985637-6 10/12/23 20:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	133	6.97	171	139	123	98.9	5	75.0-125		<u>J3</u>	20.7	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3981786-1 10/03/23 18:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.0990	2.00

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3981786-2 10/03/23 18:59

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	95.0	95.0	80.0-120	

⁴Cn

⁵Sr

L1660895-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1660895-01 10/03/23 19:03 • (MS) R3981786-5 10/03/23 19:13 • (MSD) R3981786-6 10/03/23 19:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	100	15.3	107	98.0	91.7	82.8	5	75.0-125			8.68	20

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3981162-3 10/02/23 13:05

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHGAK C6 to C10	1.21	↓	0.950	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.3			60.0-120
(S) a,a,a-Trifluorotoluene(PID)	111			72.0-128

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

(LCS) R3981162-1 10/02/23 11:58 • (LCSD) R3981162-2 10/02/23 12:21

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	125	96.9	118	77.5	94.4	60.0-120			19.6	20
(S) a,a,a-Trifluorotoluene(FID)				75.3	97.6	60.0-120				
(S) a,a,a-Trifluorotoluene(PID)				114	118	72.0-128				

L1660615-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1660615-08 10/02/23 15:30 • (MS) R3981162-4 10/02/23 23:00 • (MSD) R3981162-5 10/02/23 23:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	142	5.59	133	126	89.7	84.9	1	60.0-120			5.26	30
(S) a,a,a-Trifluorotoluene(FID)					82.1	79.4		50.0-150				
(S) a,a,a-Trifluorotoluene(PID)					107	107		72.0-128				

L1659639-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659639-09 10/02/23 17:01 • (MS) R3981162-6 10/03/23 00:08 • (MSD) R3981162-7 10/03/23 00:30

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	325	U	293	293	90.1	90.1	2.18	60.0-120			0.000	30
(S) a,a,a-Trifluorotoluene(FID)					58.2	51.0		50.0-150				
(S) a,a,a-Trifluorotoluene(PID)					101	101		72.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3981956-3 10/03/23 02:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHGAK C6 to C10	1.24	↓	0.950	2.50
(S) a,a,a-Trifluorotoluene(FID)	90.3			60.0-120
(S) a,a,a-Trifluorotoluene(PID)	112			72.0-128

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

(LCS) R3981956-1 10/03/23 01:38 • (LCSD) R3981956-2 10/03/23 02:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	125	109	114	87.2	91.2	60.0-120			4.48	20
(S) a,a,a-Trifluorotoluene(FID)				75.0	67.8	60.0-120				
(S) a,a,a-Trifluorotoluene(PID)				115	117	72.0-128				

L1659662-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659662-01 10/03/23 09:15 • (MS) R3981956-4 10/03/23 11:52 • (MSD) R3981956-5 10/03/23 12:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	117	3.50	81.8	86.2	66.8	70.6	1	60.0-120			5.31	30
(S) a,a,a-Trifluorotoluene(FID)					89.4	109		50.0-150				
(S) a,a,a-Trifluorotoluene(PID)					110	111		72.0-128				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3980945-3 10/01/23 07:11

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
1,2-Dibromoethane	U		0.000648	0.00250
(S) Toluene-d8	101			75.0-131
(S) 4-Bromofluorobenzene	92.0			67.0-138
(S) 1,2-Dichloroethane-d4	107			70.0-130

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

(LCS) R3980945-1 10/01/23 05:35 • (LCSD) R3980945-2 10/01/23 05:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.119	0.111	95.2	88.8	70.0-123			6.96	20
Toluene	0.125	0.114	0.115	91.2	92.0	75.0-121			0.873	20
Ethylbenzene	0.125	0.113	0.115	90.4	92.0	74.0-126			1.75	20
Total Xylenes	0.375	0.331	0.327	88.3	87.2	72.0-127			1.22	20
1,2-Dibromoethane	0.125	0.115	0.111	92.0	88.8	74.0-128			3.54	20
(S) Toluene-d8				97.1	101	75.0-131				
(S) 4-Bromofluorobenzene				90.9	91.2	67.0-138				
(S) 1,2-Dichloroethane-d4				110	107	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) R3982651-1 10/05/23 16:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
AK102 DRO C10-C25	U		52.1	150
<i>(S) o-Terphenyl</i>	71.2			60.0-120

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

(LCS) R3982651-2 10/05/23 16:45 • (LCSD) R3982651-5 10/05/23 17:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	200	168	163	84.0	81.5	75.0-125			3.02	20
<i>(S) o-Terphenyl</i>				78.7	75.7	60.0-120				

L1659968-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659968-01 10/05/23 17:13 • (MS) R3982651-3 10/05/23 17:27 • (MSD) R3982651-4 10/05/23 17:42

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	247	U	244	255	98.5	103	1	75.0-125			4.49	20
<i>(S) o-Terphenyl</i>					92.1	92.5		50.0-150				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3981881-2 10/04/23 02:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	50.0			14.0-149
(S) 2-Fluorobiphenyl	53.6			34.0-125
(S) p-Terphenyl-d14	78.8			23.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3981881-1 10/04/23 01:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0679	84.9	50.0-126	
Acenaphthene	0.0800	0.0643	80.4	50.0-120	
Acenaphthylene	0.0800	0.0679	84.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0747	93.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0714	89.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0688	86.0	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0676	84.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0705	88.1	49.0-125	
Chrysene	0.0800	0.0726	90.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0752	94.0	47.0-125	
Fluoranthene	0.0800	0.0726	90.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3981881-1 10/04/23 01:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0698	87.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0833	104	46.0-125	
Naphthalene	0.0800	0.0594	74.3	50.0-120	
Phenanthrene	0.0800	0.0670	83.8	47.0-120	
Pyrene	0.0800	0.0718	89.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0641	80.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0645	80.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0635	79.4	50.0-120	
<i>(S) Nitrobenzene-d5</i>			69.1	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			64.9	34.0-125	
<i>(S) p-Terphenyl-d14</i>			82.1	23.0-120	

L1659968-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1659968-10 10/04/23 07:56 • (MS) R3981881-3 10/04/23 08:14 • (MSD) R3981881-4 10/04/23 08:31

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0842	U	0.0713	0.0705	84.6	84.6	1	10.0-145			1.07	30
Acenaphthene	0.0842	U	0.0612	0.0625	72.7	75.0	1	14.0-127			2.09	27
Acenaphthylene	0.0842	U	0.0664	0.0683	78.8	81.9	1	21.0-124			2.73	25
Benzo(a)anthracene	0.0842	U	0.0774	0.0757	91.9	90.8	1	10.0-139			2.26	30
Benzo(a)pyrene	0.0842	U	0.0835	0.0819	99.1	98.2	1	10.0-141			1.96	31
Benzo(b)fluoranthene	0.0842	U	0.0686	0.0672	81.4	80.6	1	10.0-140			2.07	36
Benzo(g,h,i)perylene	0.0842	U	0.0699	0.0663	82.9	79.5	1	10.0-140			5.23	33
Benzo(k)fluoranthene	0.0842	U	0.0744	0.0718	88.3	86.1	1	10.0-137			3.55	31
Chrysene	0.0842	U	0.0763	0.0760	90.5	91.2	1	10.0-145			0.284	30
Dibenz(a,h)anthracene	0.0842	U	0.0770	0.0737	91.4	88.3	1	10.0-132			4.44	31
Fluoranthene	0.0842	U	0.0731	0.0690	86.8	82.8	1	10.0-153			5.78	33
Fluorene	0.0842	U	0.0686	0.0674	81.4	80.8	1	11.0-130			1.75	29
Indeno(1,2,3-cd)pyrene	0.0842	U	0.0839	0.0788	99.6	94.6	1	10.0-137			6.24	32
Naphthalene	0.0842	U	0.0574	0.0584	68.1	70.1	1	10.0-135			1.87	27
Phenanthrene	0.0842	U	0.0664	0.0639	78.8	76.7	1	10.0-144			3.81	31
Pyrene	0.0842	U	0.0697	0.0684	82.7	82.0	1	10.0-148			1.88	35
1-Methylnaphthalene	0.0842	U	0.0630	0.0638	74.7	76.6	1	10.0-142			1.36	28
2-Methylnaphthalene	0.0842	U	0.0643	0.0656	76.3	78.6	1	10.0-137			2.00	28
2-Chloronaphthalene	0.0842	U	0.0622	0.0630	73.8	75.5	1	29.0-120			1.21	24
<i>(S) Nitrobenzene-d5</i>					61.7	66.0		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					60.3	62.0		34.0-125				
<i>(S) p-Terphenyl-d14</i>					87.9	86.8		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3981930-2 10/04/23 12:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	51.6			14.0-149
(S) 2-Fluorobiphenyl	65.1			34.0-125
(S) p-Terphenyl-d14	56.5			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3982219-1 10/05/23 00:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600

Method Blank (MB)

(MB) R3982219-1 10/05/23 00:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	54.4			14.0-149
(S) 2-Fluorobiphenyl	62.4			34.0-125
(S) p-Terphenyl-d14	64.9			23.0-120

Laboratory Control Sample (LCS)

(LCS) R3981930-1 10/04/23 12:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0574	71.8	50.0-126	
Acenaphthene	0.0800	0.0537	67.1	50.0-120	
Acenaphthylene	0.0800	0.0584	73.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0586	73.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0465	58.1	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0447	55.9	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0423	52.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0456	57.0	49.0-125	
Chrysene	0.0800	0.0580	72.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0494	61.8	47.0-125	
Fluoranthene	0.0800	0.0579	72.4	49.0-129	
Fluorene	0.0800	0.0605	75.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0496	62.0	46.0-125	
Naphthalene	0.0800	0.0507	63.4	50.0-120	
Phenanthrene	0.0800	0.0545	68.1	47.0-120	
Pyrene	0.0800	0.0605	75.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0544	68.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0556	69.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0523	65.4	50.0-120	
(S) Nitrobenzene-d5			68.6	14.0-149	
(S) 2-Fluorobiphenyl			69.9	34.0-125	
(S) p-Terphenyl-d14			59.6	23.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1661967-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1661967-02 10/04/23 13:19 • (MS) R3981930-3 10/04/23 13:39 • (MSD) R3981930-4 10/04/23 13:59

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0830	U	0.0552	0.0594	66.5	71.2	1	10.0-145			7.24	30
Acenaphthene	0.0830	U	0.0482	0.0540	58.1	64.7	1	14.0-127			11.3	27
Acenaphthylene	0.0830	U	0.0515	0.0585	62.1	70.2	1	21.0-124			12.8	25
Benzo(a)anthracene	0.0830	0.00564	0.0740	0.0598	82.3	64.9	1	10.0-139			21.2	30
Benzo(a)pyrene	0.0830	0.00504	0.0739	0.0557	82.9	60.7	1	10.0-141			28.1	31
Benzo(b)fluoranthene	0.0830	0.00713	0.0728	0.0480	79.1	49.0	1	10.0-140		J3	41.1	36
Benzo(g,h,i)perylene	0.0830	0.00321	0.0563	0.0452	63.9	50.4	1	10.0-140			21.8	33
Benzo(k)fluoranthene	0.0830	0.00261	0.0610	0.0492	70.3	55.8	1	10.0-137			21.4	31
Chrysene	0.0830	0.00767	0.0949	0.0628	105	66.1	1	10.0-145		J3	40.8	30
Dibenz(a,h)anthracene	0.0830	U	0.0535	0.0515	64.5	61.7	1	10.0-132			3.85	31
Fluoranthene	0.0830	0.0180	0.135	0.0647	141	56.0	1	10.0-153		J3	70.5	33
Fluorene	0.0830	U	0.0511	0.0579	61.5	69.4	1	11.0-130			12.5	29
Indeno(1,2,3-cd)pyrene	0.0830	0.00382	0.0655	0.0509	74.2	56.4	1	10.0-137			25.1	32
Naphthalene	0.0830	U	0.0446	0.0526	53.7	63.0	1	10.0-135			16.4	27
Phenanthrene	0.0830	0.0105	0.0809	0.0567	84.7	55.3	1	10.0-144		J3	35.1	31
Pyrene	0.0830	0.0142	0.116	0.0659	123	62.0	1	10.0-148		J3	55.1	35
1-Methylnaphthalene	0.0830	U	0.0473	0.0557	56.9	66.7	1	10.0-142			16.3	28
2-Methylnaphthalene	0.0830	U	0.0481	0.0557	57.9	66.7	1	10.0-137			14.6	28
2-Chloronaphthalene	0.0830	U	0.0473	0.0545	56.9	65.3	1	29.0-120			14.2	24
(S) Nitrobenzene-d5					67.7	66.8		14.0-149				
(S) 2-Fluorobiphenyl					73.3	71.2		34.0-125				
(S) p-Terphenyl-d14					61.0	59.9		23.0-120				

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

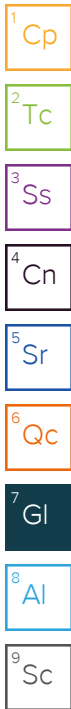
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	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.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.



ACCREDITATIONS & LOCATIONS

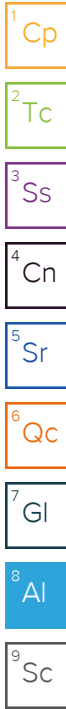
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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.



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

Billing Information:
 Attn: 5030 ETS Group
 PO Box 7601
 Springfield, OH 45501

Pres Chk

Report to:
Ms. Leslie Petre

Email To: craig.cothron@pacelabs.com

Project Description:
MPC 157575

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

Please Circle:
 AK

Phone: **1 907-343-5108**

Client Project #
 203723146

Lab Project #
STAAAKSSA-MPC157575

Collected by (print):
 Leslie Petre

Site/Facility ID #
 MPC157575

P.O. #

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 #
 Date Results Needed

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	AK101 60mIAmb/MeOH/Syr	AK102,SV8270PAHSIMD 4ozClr-NoPres	PBG 2ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEXMED 40mIAmb/MeOH10ml/Syr
CROWLEY 2023-1	grab	SS	10	9/21/23	10:25	5	X	X	X	X	X
CROWLEY 2023-1	grab	SS	15	9/21/23	10:35	5	X	X	X	X	X
CROWLEY 2023-2	grab	SS	10	9/21/23	11:15	5	X	X	X	X	X
CROWLEY 2023-2	grab	SS	15	9/21/23	11:25	5	X	X	X	X	X
CROWLEY 2023-3	grab	SS	10	9/21/23	12:00	5	X	X	X	X	X
CROWLEY 2023-3	grab	SS	15	9/21/23	12:05	5	X	X	X	X	X
CROWLEY 2023-4	grab	SS	10	9/21/23	12:50	5	X	X	X	X	X
CROWLEY 2023-4	grab	SS	15	9/21/23	13:40	5	X	X	X	X	X
CROWLEY 2023-5	grab	SS	10	9/21/23	13:50	5	X	X	X	X	X
CROWLEY 2023-5	grab	SS	15	9/21/23	13:55	5	X	X	X	X	X

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

Remarks:
 Samples returned via: UPS FedEx Courier
 Tracking #

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

Relinquished by: (Signature)

Date: **9/26/23**
 Time: **12:00pm**

Received by: (Signature)

Trip Blank Received: Yes No
 HCl/MeOH TBR
 Temp: **3.2 to 3.2** °C
 Bottles Received: **70**

Relinquished by: (Signature)

Date: **9/27**
 Time: **9:00**

Received for lab by: (Signature)

Temp: **3.2 to 3.2** °C
 Bottles Received: **70**

Relinquished by: (Signature)

Date: **9/27**
 Time: **9:00**

Received for lab by: (Signature)

Temp: **3.2 to 3.2** °C
 Bottles Received: **70**

If preservation required by Login: Date/Time
 Hold:
 Condition: **NCF / OK**

Analysis / Container / Preservative
AK101 60mIAmb/MeOH/Syr
AK102,SV8270PAHSIMD 4ozClr-NoPres
PBG 2ozClr-NoPres
TS 4ozClr-NoPres
V8260BTEXMED 40mIAmb/MeOH10ml/Syr

Chain of Custody Page **1** of **2**

Pace
 PEOPLE ADVANCING SCIENCE

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/hubs/pas-standard-terms.pdf>

SDG # **21159110**

E200

Acctnum: **STAAAKSSA**
 Template: **T217526**
 Prelogin: **P1026002**
 PM: **034 - Craig Cothron**
 PB:

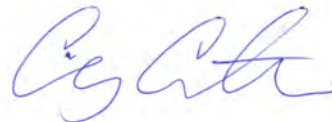
Shipped Via: **FedEX 2nd Day**

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08
	-09
	-10

Stantec - Anchorage, AK

Sample Delivery Group: L1669186
Samples Received: 10/21/2023
Project Number: 203723146
Description: MPC 157575
Site: MPC157575
Report To: Ms. Leslie Petre
725 E Fireweed Lane
Suite 200
Anchorage, AK 99503

Entire Report Reviewed By:



Craig Cothron
Project Manager

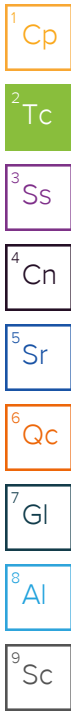
Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory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

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

CROWLEY 2023-4-6FT L1669186-01 Solid

Collected by: Geoff Moorhead
 Collected date/time: 10/18/23 17:20
 Received date/time: 10/21/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2158310	1	10/27/23 09:32	10/27/23 09:38	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2159175	5	10/27/23 09:28	10/27/23 15:19	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method AK101	WG2160347	1.03	10/18/23 17:20	10/30/23 04:48	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2159023	1	10/18/23 17:20	10/27/23 05:31	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159922	1	10/31/23 06:42	10/31/23 23:26	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG2160124	1	10/30/23 09:00	10/30/23 20:20	DSH	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

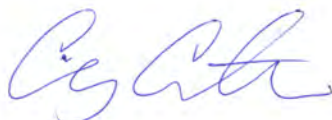
7 Gl

8 Al

9 Sc

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.0		1	10/27/2023 09:38	WG2158310

Metals (ICPMS) by Method 6020

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	6.41		0.108	2.17	5	10/27/2023 15:19	WG2159175

Volatile Organic Compounds (GC) by Method AK101

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPHGAK C6 to C10	3.33	<u>B</u>	1.06	2.81	1.03	10/30/2023 04:48	WG2160347
(S) a,a,a-Trifluorotoluene(FID)	98.5			50.0-150		10/30/2023 04:48	WG2160347
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		72.0-128		10/30/2023 04:48	WG2160347

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000551	0.00118	1	10/27/2023 05:31	WG2159023
Toluene	0.00224	<u>J</u>	0.00153	0.00590	1	10/27/2023 05:31	WG2159023
Ethylbenzene	0.00344		0.000869	0.00295	1	10/27/2023 05:31	WG2159023
Total Xylenes	0.0231		0.00104	0.00767	1	10/27/2023 05:31	WG2159023
1,2-Dibromoethane	U		0.000764	0.00295	1	10/27/2023 05:31	WG2159023
(S) Toluene-d8	105			75.0-131		10/27/2023 05:31	WG2159023
(S) 4-Bromofluorobenzene	96.9			67.0-138		10/27/2023 05:31	WG2159023
(S) 1,2-Dichloroethane-d4	95.3			70.0-130		10/27/2023 05:31	WG2159023

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
AK102 DRO C10-C25	U		56.7	163	1	10/31/2023 23:26	WG2159922
(S) o-Terphenyl	76.5			50.0-150		10/31/2023 23:26	WG2159922

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.00250	0.00652	1	10/30/2023 20:20	WG2160124
Acenaphthene	0.00258	<u>J</u>	0.00227	0.00652	1	10/30/2023 20:20	WG2160124
Acenaphthylene	U		0.00235	0.00652	1	10/30/2023 20:20	WG2160124
Benzo(a)anthracene	U		0.00188	0.00652	1	10/30/2023 20:20	WG2160124
Benzo(a)pyrene	U		0.00195	0.00652	1	10/30/2023 20:20	WG2160124
Benzo(b)fluoranthene	U		0.00166	0.00652	1	10/30/2023 20:20	WG2160124
Benzo(g,h,i)perylene	U		0.00192	0.00652	1	10/30/2023 20:20	WG2160124
Benzo(k)fluoranthene	U		0.00234	0.00652	1	10/30/2023 20:20	WG2160124
Chrysene	U		0.00252	0.00652	1	10/30/2023 20:20	WG2160124
Dibenz(a,h)anthracene	U		0.00187	0.00652	1	10/30/2023 20:20	WG2160124
Fluoranthene	U		0.00247	0.00652	1	10/30/2023 20:20	WG2160124
Fluorene	0.0150		0.00223	0.00652	1	10/30/2023 20:20	WG2160124
Indeno(1,2,3-cd)pyrene	U		0.00197	0.00652	1	10/30/2023 20:20	WG2160124
Naphthalene	0.00676	<u>J</u>	0.00444	0.0217	1	10/30/2023 20:20	WG2160124
Phenanthrene	0.0352		0.00251	0.00652	1	10/30/2023 20:20	WG2160124
Pyrene	U		0.00217	0.00652	1	10/30/2023 20:20	WG2160124
1-Methylnaphthalene	0.00749	<u>J</u>	0.00488	0.0217	1	10/30/2023 20:20	WG2160124



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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2-Methylnaphthalene	0.00991	J	0.00464	0.0217	1	10/30/2023 20:20	WG2160124
2-Chloronaphthalene	U		0.00507	0.0217	1	10/30/2023 20:20	WG2160124
(S) Nitrobenzene-d5	99.4			14.0-149		10/30/2023 20:20	WG2160124
(S) 2-Fluorobiphenyl	89.4			34.0-125		10/30/2023 20:20	WG2160124
(S) p-Terphenyl-d14	86.6			23.0-120		10/30/2023 20:20	WG2160124

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

Method Blank (MB)

(MB) R3992296-1 10/27/23 09:38

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

L1669177-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1669177-05 10/27/23 09:38 • (DUP) R3992296-3 10/27/23 09:38

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	84.6	84.0	1	0.718		10

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3992296-2 10/27/23 09:38

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3992118-1 10/27/23 14:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.0990	2.00

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3992118-2 10/27/23 14:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	107	107	80.0-120	

4 Cn

5 Sr

L1669078-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1669078-02 10/27/23 14:25 • (MS) R3992118-5 10/27/23 14:35 • (MSD) R3992118-6 10/27/23 14:39

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	101	24.3	120	108	94.8	83.6	5	75.0-125			9.93	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3992918-2 10/29/23 20:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHGAK C6 to C10	0.988	<u>J</u>	0.950	2.50
(S) a,a,a-Trifluorotoluene(FID)	98.7			60.0-120
(S) a,a,a-Trifluorotoluene(PID)	0.000	<u>J2</u>		72.0-128

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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

(LCS) R3992918-1 10/29/23 19:41 • (LCSD) R3992918-3 10/30/23 02:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	125	147	138	118	110	60.0-120			6.32	20
(S) a,a,a-Trifluorotoluene(FID)				102	99.6	60.0-120				
(S) a,a,a-Trifluorotoluene(PID)				0.000	0.000	72.0-128	<u>J2</u>	<u>J2</u>		

L1668255-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668255-07 10/29/23 23:26 • (MS) R3992918-4 10/30/23 07:29 • (MSD) R3992918-5 10/30/23 07:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	109	U	115	112	106	103	1	60.0-120			2.51	30
(S) a,a,a-Trifluorotoluene(FID)					95.0	92.9		50.0-150				
(S) a,a,a-Trifluorotoluene(PID)					0.000	0.000		72.0-128	<u>J2</u>	<u>J2</u>		

L1669498-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1669498-03 10/30/23 06:09 • (MS) R3992918-6 10/30/23 08:23 • (MSD) R3992918-7 10/30/23 08:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPHGAK C6 to C10	137	U	137	142	100	104	1.06	60.0-120			3.69	30
(S) a,a,a-Trifluorotoluene(FID)					89.9	93.1		50.0-150				
(S) a,a,a-Trifluorotoluene(PID)					0.000	0.000		72.0-128	<u>J2</u>	<u>J2</u>		

Method Blank (MB)

(MB) R3993118-3 10/27/23 02:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
1,2-Dibromoethane	U		0.000648	0.00250
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	97.4			67.0-138
(S) 1,2-Dichloroethane-d4	99.4			70.0-130

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

(LCS) R3993118-1 10/27/23 00:02 • (LCSD) R3993118-2 10/27/23 00:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.137	0.130	110	104	70.0-123			5.24	20
Toluene	0.125	0.143	0.138	114	110	75.0-121			3.56	20
Ethylbenzene	0.125	0.141	0.136	113	109	74.0-126			3.61	20
Total Xylenes	0.375	0.425	0.421	113	112	72.0-127			0.946	20
1,2-Dibromoethane	0.125	0.141	0.143	113	114	74.0-128			1.41	20
(S) Toluene-d8				105	106	75.0-131				
(S) 4-Bromofluorobenzene				94.9	95.0	67.0-138				
(S) 1,2-Dichloroethane-d4				102	100	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) R3993642-1 10/31/23 15:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
AK102 DRO C10-C25	U		52.1	150
<i>(S) o-Terphenyl</i>	69.7			60.0-120

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

(LCS) R3993642-2 10/31/23 15:57 • (LCSD) R3993642-3 10/31/23 16:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	200	159	175	79.5	87.5	75.0-125			9.58	20
<i>(S) o-Terphenyl</i>				74.2	74.5	60.0-120				

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

Method Blank (MB)

(MB) R3993765-2 10/30/23 16:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	88.7			14.0-149
(S) 2-Fluorobiphenyl	82.7			34.0-125
(S) p-Terphenyl-d14	81.8			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3993765-1 10/30/23 16:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0682	85.3	50.0-126	
Acenaphthene	0.0800	0.0671	83.9	50.0-120	
Acenaphthylene	0.0800	0.0668	83.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0749	93.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0729	91.1	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0754	94.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0720	90.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0758	94.8	49.0-125	
Chrysene	0.0800	0.0773	96.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0795	99.4	47.0-125	
Fluoranthene	0.0800	0.0726	90.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3993765-1 10/30/23 16:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0746	93.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0834	104	46.0-125	
Naphthalene	0.0800	0.0677	84.6	50.0-120	
Phenanthrene	0.0800	0.0709	88.6	47.0-120	
Pyrene	0.0800	0.0762	95.3	43.0-123	
1-Methylnaphthalene	0.0800	0.0690	86.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0729	91.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0781	97.6	50.0-120	
(S) Nitrobenzene-d5			115	14.0-149	
(S) 2-Fluorobiphenyl			101	34.0-125	
(S) p-Terphenyl-d14			99.9	23.0-120	

L1669111-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1669111-08 10/30/23 22:23 • (MS) R3993765-3 10/30/23 22:40 • (MSD) R3993765-4 10/30/23 22:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0935	0.00429	11.3	0.0745	12000	74.7	1	10.0-145	<u>E J5</u>	<u>J3</u>	197	30
Acenaphthene	0.0935	U	4.69	0.0659	5010	70.1	1	14.0-127	<u>J5</u>	<u>J3</u>	194	27
Acenaphthylene	0.0935	U	0.143	0.0687	153	73.1	1	21.0-124	<u>J5</u>	<u>J3</u>	70.1	25
Benzo(a)anthracene	0.0935	0.0247	21.6	0.0906	23100	70.1	1	10.0-139	<u>E J5</u>	<u>J3</u>	198	30
Benzo(a)pyrene	0.0935	0.0151	11.7	0.0854	12500	74.7	1	10.0-141	<u>E J5</u>	<u>J3</u>	197	31
Benzo(b)fluoranthene	0.0935	0.0227	15.2	0.0839	16300	65.2	1	10.0-140	<u>E J5</u>	<u>J3</u>	198	36
Benzo(g,h,i)perylene	0.0935	0.0113	4.38	0.0718	4670	64.3	1	10.0-140	<u>J5</u>	<u>J3</u>	194	33
Benzo(k)fluoranthene	0.0935	0.00834	5.68	0.0733	6060	69.1	1	10.0-137	<u>E J5</u>	<u>J3</u>	195	31
Chrysene	0.0935	0.0231	19.8	0.0875	21200	68.5	1	10.0-145	<u>E J5</u>	<u>J3</u>	198	30
Dibenz(a,h)anthracene	0.0935	0.00286	1.72	0.0776	1840	79.5	1	10.0-132	<u>J5</u>	<u>J3</u>	183	31
Fluoranthene	0.0935	0.0556	16.2	0.105	17200	52.5	1	10.0-153	<u>E J5</u>	<u>J3</u>	197	33
Fluorene	0.0935	U	6.80	0.0739	7270	78.6	1	11.0-130	<u>E J5</u>	<u>J3</u>	196	29
Indeno(1,2,3-cd)pyrene	0.0935	0.0115	6.07	0.0890	6480	82.5	1	10.0-137	<u>E J5</u>	<u>J3</u>	194	32
Naphthalene	0.0935	U	1.32	0.0733	1410	73.7	1	10.0-135	<u>J5</u>	<u>J3</u>	179	27
Phenanthrene	0.0935	0.0195	16.3	0.0935	17400	78.8	1	10.0-144	<u>E J5</u>	<u>J3</u>	198	31
Pyrene	0.0935	0.0436	17.5	0.0935	18600	53.1	1	10.0-148	<u>E J5</u>	<u>J3</u>	198	35
1-Methylnaphthalene	0.0935	U	0.804	0.0753	856	76.4	1	10.0-142	<u>J5</u>	<u>J3</u>	166	28
2-Methylnaphthalene	0.0935	U	0.948	0.0821	1010	82.5	1	10.0-137	<u>J5</u>	<u>J3</u>	168	28
2-Chloronaphthalene	0.0935	U	0.0665	0.0734	70.9	78.0	1	29.0-120			9.96	24
(S) Nitrobenzene-d5					97.1	101		14.0-149				
(S) 2-Fluorobiphenyl					73.4	80.7		34.0-125				
(S) p-Terphenyl-d14					130	70.6		23.0-120	<u>J1</u>			

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

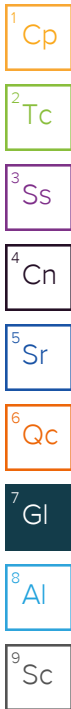
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	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.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
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.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



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

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sydney Souza	CS Site Name:	Tesoro North Store 101IFC	Lab Name:	Pace Analytical
Title:	Environmental Scientist	ADEC File No.:	100.26.022	Lab Report No.:	L1659968
Consulting Firm:	Stantec Consulting Services Inc.	Hazard ID No.:	224	Lab Report Date:	September 27, 2023

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: Click or tap here to enter text.

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): 3.2° C

Sample temperature(s): Click or tap here to enter text.

CS Site Name: Tesoro North Store 101IFC

Lab Report No.: L1659968

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: Sample condition documented as OK

- 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 documented

- e. Is the data quality or usability affected?

Yes No N/A

Comments: No discrepancies documented

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: Case narrative documents no errors or discrepancies “unless qualified or notated within report”

- c. Were all the corrective actions documented?

Yes No N/A

Comments: No corrective actions taken

- 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: Tesoro North Store 101IFC

Lab Report No.: L1659968

- b. Are all applicable holding times met?
Yes No N/A
Comments: Click or tap here to enter text.
- c. Are all soils reported on a dry weight basis?
Yes No N/A
Comments: Click or tap here to enter text.
- 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: Click or tap here to enter text.

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: Method blank had detections below LOQ for all analytes.
 - iii. If above LoQ or RL, what samples are affected?
Comments: Click or tap here to enter text.
 - 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: Click or tap here to enter text.

CS Site Name: Tesoro North Store 101IFC

Lab Report No.: L1659968

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: Click or tap here to enter text.

- 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: The affected analyte is not reported.

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: Tesoro North Store 101IFC

Lab Report No.: L1659968

- 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: Click or tap here to enter text.
 - 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: Click or tap here to enter text.
 - iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

CS Site Name: Tesoro North Store 101IFC

Lab Report No.: L1659968

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: Click or tap here to enter text.

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: None.

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.

CS Site Name: Tesoro North Store 101IFC

Lab Report No.: L1659968

- 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

Is the data quality or usability affected? (Explain)

Yes No N/A

Comments: Lead/Soil was 56%

- 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: Used disposable equipment

- ii. Are all results less than LoQ or RL?

Yes No N/A

Comments: Used disposable equipment

- 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.